Landscaping *with* Fruit

A HOMEOWNER'S GUIDE

Landscaping *with* Fruit

Lee Reich

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Dedicated to Rosalind Creasy who, in 1982, helped open our eyes to the beauty of edible plants. Her landmark book *The Complete Book of Edible Landscaping* opened the door to getting these plants out of orchards and vegetable gardens and into our yards.

Grapes that are trained over an arbor provide dappled shade for an outdoor living area, as well as a bounty of fruit at the end of the summer.

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A ‘Stanley’ plum tree in the front yard provides luscious fruits and ornamental presence.

INTRODUCTION

CONTRARY TO WHAT GROWNUPS MAY HAVE TOLD YOU AS A CHILD, YOU CAN "HAVE your cake and eat it too." When it comes to planting your yard, at least.

Garden plants have traditionally been pigeonholed into one of two categories: utilitarian, for providing food, or ornamental, for providing beauty. This ethos has plopped fruit plantings out of sight, to far corners of our backyards. And rightly so, because we generally have not chosen fruit trees, shrubs, and vines for their beauty or for their ease of growing. Where conditions favored pests—and, hence, pesticide sprays—we surely could not allow such plants near terraces or other living or play areas. When constraints of time or space have forced a decision between planting for beauty and planting for food (which, after all, can be bought), that decision has usually tipped in favor of planting for beauty.

That choice need not be made; you can have both! The pages that follow will lead you through the steps necessary to choose, plant, and grow trees, shrubs, and vines that provide luscious fruits while gracing your yard with their beauty.

In the last few decades, even the humble vegetable garden has been recognized for its untapped beauty. Ornamental vegetables, such as 'Scarlet Runner' beans and 'Rainbow' chard, have segued out of the vegetable garden and into the flower bed, and the flavors of edible flowers, such as spicy nasturtiums, are now more appreciated.

The time has come for fruit trees, shrubs, and vines to come into their own as ornamentals. "Luscious landscaping," as I'm calling it, works especially well with fruits. Why? Because fruit-bearing trees, shrubs, and vines become permanent fixtures in the landscape, their branching patterns, their bark, and their trunks enduring throughout the year and looking more dramatic with time. Many fruiting plants are spectacular ornaments and especially so in certain seasons: Just look at peach branches studded in spring with powder puffs of pink blossoms, or persimmon branches in autumn bowing under the weight of their bright orange fruit. Nanking cherry and Juneberry are among those plants that bear delectable fruits yet have actually been planted most often as ornamentals, their gustatory offerings unknowingly overlooked or ignored.

One nice feature of this kind of landscaping is that eating the fruit doesn't ruin the scenery, something I realized was *not* the case when I began harvesting lettuce heads from the pretty tapestry I once created with lettuces of various textures and colors in one of my vegetable beds. My persimmons' fruits cling to their branches for weeks and bear in such profusion that the trees' festive look lingers well into autumn despite my picking and eating plenty of their bounty. Perhaps the biggest bonus is that you get to eat homegrown fruits, nature's original desserts.

The Joy of Homegrown Fruits

Allow me a slight digression here: If you've never or rarely tasted homegrown fruits, you've missed out on some real treats. Commercial varieties of apples, peaches, grapes, and other fruits are bred and selected to bear uniformly and heavily, to withstand the jostling and other traumas of shipping, and then to hold up in storage as long as possible. Their appeal is directed to everyone, to consumers from Arizona to Maine and everywhere in between—but not necessarily to *you* in particular. And then, to get fruits to market ahead of competitors and prolong their ability to keep in storage, these fruits are generally harvested underripe. As a final insult, most commercial fruits are doused with

toxic pesticides during the growing season and then, in many cases, dipped in fungicides after harvest to delay spoilage.

Contrast the fruits you can buy with what you can pick in your yard. You can grow kinds and varieties of fruits that *you* enjoy eating. Currants, for example, are rarely seen on market shelves, and surely not the especially delectable 'Primus' variety of white currant. Apples are ubiquitous year-round in the markets but you're unlikely to be able to reach onto a shelf for varieties such as 'Esopus Spitzenberg' and 'Hudson's Golden Gem', both favorites of apple connoisseurs. When you grow fruits in your yard, they hang on to the plants until just the right moment for harvest. 'Macoun' apples that I pick up on crisp autumn mornings from the previous night's drops taste different—and much, much better—from those I can buy even at local orchards. Alpine strawberries are truly delectable when dead ripe, but at this peak of perfection are too soft to be transported much farther than from hand to mouth—no problem when they're homegrown. No need to wash those fruits you pick from your backyard before eating them, because you've selected plants that don't need spraying or dipping with pesticides. There's much talk nowadays about the environmental and health-related benefits of eating locally grown food; you can't get more local than your yard! Finally, those luscious, healthful fruits that you've been harvesting . . . well, you could be picking them from plants that are beautifying your yard, elbow to elbow with rhododendrons, Japanese maples, forsythias, roses, and other strictly ornamental plants.

Strawberries are sweetest (but also most perishable) when picked at the peak of ripeness. This makes them ideal for backyard growing.

WHEN YOU GROW FRUITS IN YOUR YARD, THEY HANG ON TO THE PLANTS UNTIL JUST THE RIGHT MOMENT FOR HARVEST.

HOW TO CHOOSE?

Not every fruit is borne on an ornamental tree, shrub, or vine. Nor is every fruiting plant universally

as easy to grow as are most landscape plants. The goal here is to lavish no more care on your fruiting plants than you would on your maple trees, lilac bushes, and other ornamental plants. Which fruits will grow best with little or no effort in various regions of the country is something we'll consider in the pages that follow.

In addition to their ease of cultivation, I seriously evaluate the deliciousness of all the fruits I recommend. This book is not about landscaping with plants that bear merely edible fruits. A skilled cook can render even naturally unpalatable fruits tasty; I'm not and I can't. All the fruits in this book cook up into delectable jams, tarts, and the like, but they also, for the most part, are truly luscious plucked right off the plants.

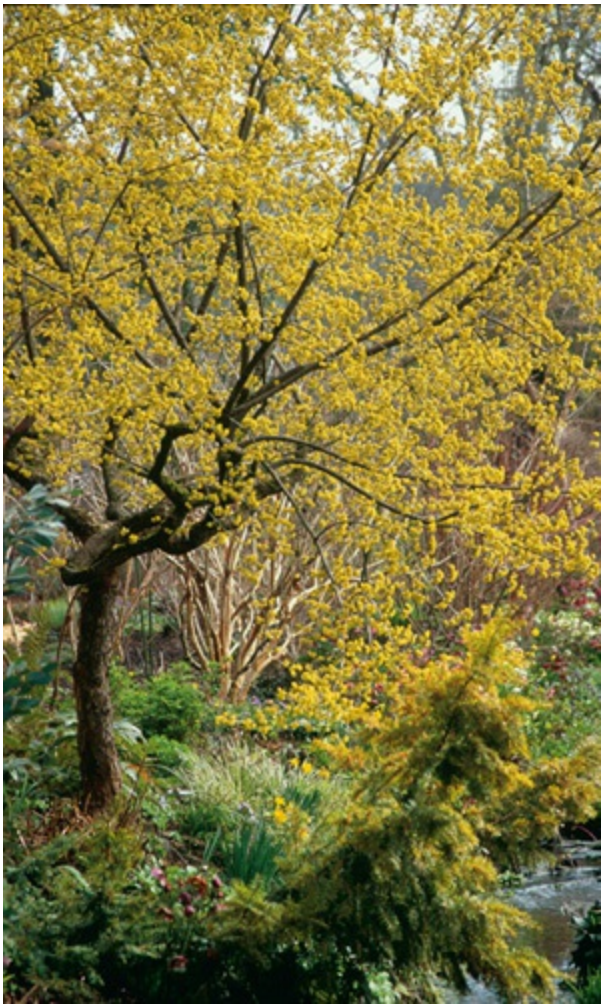
Obviously, some opinion—mine—enters the picture here about which fruits both taste good and are worthy landscape plants. Hence, you'll find nothing in this book about either elderberries or cranberries; I consider such fruits, although they're borne on attractive plants, to have bland or bad flavors straight off the plants. And although hackberry fruits present very little "meat," I find the tree so pretty and the fruit (what little there is to eat) so tasty that this plant warrants a listing. Cornelian cherry fruits are too tart for my palate, but I include this tree because it is one of the finest ornamentals and my nieces just love the flavor of these cornel cherries. So, in a few places, I do push the envelope of which plants can be considered truly luscious and truly ornamental, but I freely admit it when I do so.

Here's one thing to keep in mind as you contemplate and plan your luscious landscape: It's not an all-or-nothing proposition. There's no need to give over your landscape entirely to fruiting plants. Go ahead and put in that Japanese maple if it seems like the right plant for a particular location. But do remain open to the possibilities of also using some fruiting trees, vines, and shrubs. With the help of this book, you can integrate plants into your yard that will be a joy to both your eyes and your taste buds. Bon appétit!

A hardy kiwi vine that's trained to climb a fence bears attractive foliage, screens out the neighbors, and produces delicious fruits.

—Lee Reich
New Paltz, New York

Cornelian cherries are tart but tasty.



This yellow-flowering cornelian cherry (*Cornus mas*) in Ernie O'Byrne's Oregon garden is an important element in the spring garden, but will also produce delicious fruits later in the season.

LANDSCAPE DESIGN BASICS

DIGGING A HOLE IN A PROMINENT PLACE IN YOUR FRONT YARD, THEN SNUGGLING the roots of a cornelian cherry tree into that hole, is not necessarily luscious landscaping. Yes, you'll harvest red cornel cherries for eating fresh and for jams. And yes, you'll enjoy the profusion of the tree's yellow blossoms in spring, the mahogany hue of the leaves in autumn, and the neat growth habit of the tree year-round. But an ornamental plant is to the landscape what a tree is to the forest: Each plant contributes to the whole something beyond its own particular attributes. This chapter will guide you in thinking beyond the individual plant to create a scene that suits your needs and aesthetics, in addition to providing good eating.

Landscaping is a matter of degree. Perhaps start with only a couple of trees flanking your front doorway. Bold, lush-leaved pawpaws, with fruits like vanilla custard, are just the ticket for your eyes and taste buds, and are all the landscaping you need. Or maybe you'd like to revamp your existing front yard. Perhaps you're presented with the bare canvas of an entirely new site.

Although you could hire professionals for all or part of the design and planting, I urge you to consider doing at least some of this work yourself. Anything that you design will have your signature on it. This signature is what makes your landscape distinctively yours rather than a cookie-cutter scene designed in some office and then cloned, with some variation, around a number of home sites. Your design will reflect *your* locale, *your* inspirations, *your* memories, *your* likes and dislikes, and *your* needs.

Don't feel pressed to implement all your ideas in one fell swoop. Landscapes change over time, just as we do, which makes a case for a periodic tweaking of a landscape. In the quarter of a century at my present garden, I've already cut down an *allée* of plum trees and replanted them with apple trees, in turn replanted with pear trees; I've planted a small honey locust to replace a stately but messy and overly vigorous box-elder; and I've put my birdproof blueberry cage through four increasingly decorative and functional incarnations. All these changes reflect my personal and my family's changing tastes in what looks pretty and is flavorful, along with new things learned and experience with local growing conditions. So put your imprint on your front, back, and side yards, and then don't be afraid to change things as needed.

Why Is That Yard So Pretty?

A natural place to begin sprucing up your home grounds—even if the "design" involves nothing more than figuring out where to dig holes for a couple of ornamental fruiting plants—is to look around at public gardens and other people's yards and think about what makes them so pretty (or not). Notwithstanding the varying styles and scales of landscapes, a few basic elements spell the difference between visual success and failure. Let's not be wowed (at this point, at least) by eye candy, those riots of colorful flowers that stop traffic but lack the same long-lasting, deep satisfaction as does real candy. Color has its place, but first let's deal with the substance of the landscape.

A successful landscape has a sense of wholeness, of unity. Our eyes don't jump from plant to plant. Everything serves a purpose in the overall design. Everything fits together with the rest of the picture. A winning landscape incorporates three basic design elements: scale, rhythm, and balance.

SIZING IT UP

Scale speaks of the relative sizes of plants to each other and to other objects, especially to your home and to you. The scale of a landscape, or that part of a landscape that can be taken in with one gulp, might be set by the size of a human, a house, trees, even the sky. Property lines and existing structures fix the scale, but only to a degree; as we'll see later, there are tricks for altering apparent scale. Generally, we like things to be "in scale," avoiding, for example, planting a large tree where it would eventually overwhelm a small landscape or house.

But hey, landscaping is art, and rules are not to be followed blindly, so who's to say that there aren't situations where anomalous scale can be pleasing? Or, at least, enjoyable or humorous: Picture a small bosk of miniature fruit trees on a portion of an expansive lawn. Or a small yard sheltered beneath the massive, drooping limbs of an ancient apple tree. Somewhat or gradually anomalous scale too has its uses: for example, to alter the apparent size of other things, such as when a tall hedge surrounding an expansive patio causes it seemingly to shrink into a cozy, but not cramped, nook.

This living fence of espaliered pear trees is a graceful alternative to a more casual hedge. The repeating forms of the Y-shaped trees also add a sense of rhythm to the landscape.

A Fruitful Allée

KING LOUIS XIV WAS A FAN OF ALLÉES, AND SO AM I. An allée is an easy way to make a bold landscape statement with a line that harmoniously knits together the scene to carry your eyes and perhaps beckon you forward.

King Louis' allées were miles long and consisted of large trees bordering canals and graveled paths. My staff (me) and my grounds couldn't accommodate such a royal scale of planting, but no matter: Allées work even on a much smaller scale. The important thing is to scale the size of the trees

to the scale of the planting.

My own allée—using fruits, of course—consists of a 50-foot row of dwarf apple trees spaced 4 feet apart and curving along one edge of the adjacent vegetable garden before heading straight back to the rear of the property. Facing this row, parallel to the straight portion, is a similarly spaced row of dwarf pear trees.

Uniformity is what enables an allée to tie the scene together, so ideally an allée is composed of only a single species or even variety. It was with a nod to my tongue and little offense to my eyes that I faced the apple row with a pear row, and also made each tree within the apple or pear row of a different variety from all the others. Just one kind of fruit would inundate me with too much of a good thing at once.

Like all allées, mine becomes more dramatic as age thickens the branches and especially the trunks. The whitewash of the diluted latex I paint on the trunks not only prevents winter sunscald but also further highlights the line of trunks.

Some larger luscious landscape trees suitable for a long allée are apple, apricot, crab apple, cornelian cherry, hackberry, mulberry, pear, persimmon, quince, raisin tree, Russian olive, shipova, sorbus, and sweet cherry. Luscious landscape trees that would need minimal pruning for smaller allées are dwarf apple, dwarf pear, hackberry, jujube, juneberry, medlar, nectarine, pawpaw, peach, plum, quince, and tart cherry.

A Balanced Dooryard Planting

PLANTS FRAMING YOUR FRONT DOORWAY MAKE THE entranceway itself more obvious and more inviting. The door itself is a natural axis on either side of which to create balance, and the tall outline of the door cries out for some plants to soften the visual transition to flat ground, a function also satisfied by steps and a landing, a porch, or columns. Generally, trees are needed for the step down from the tall walls of, say, the Gothic Victorian home; low shrubs are often more appropriate for, say, the front entrance of the low-slung Japanese-style home.

Mirror-image plantings on either side of the entranceway are appropriate for the formal landscape

and home; in informal settings, balance each side with equal-weight plantings. A grouping of bushes, for example, can counterbalance a tree. Don't confine your plantings to just one or a couple of plants framing your doorway. Step down trees further with low shrubs around their ankles, and, where the planting involves bushes rather than trees, consider a sumptuous mixed border with bushes and flowers.

Dooryard trees, which capture some of the upright aspect of the nearby wall and door but are neither too large nor spreading, or can be easily kept so, include such edibles as jujube, juneberry, quince, dwarf apple (especially columnar varieties), dwarf crab apple, medlar, tart cherry, dwarf pear, and dwarf shipova. Some larger bushes to consider for a dooryard are juneberry, seaberry, highbush blueberry, and Nanking cherry; smaller bushes and ground covers include red (white and pink) currant, rose, beach plum, huckleberry, clove currant, wintergreen, lowbush blueberry, lingonberry, and alpine strawberry.

As always, it's not necessary or perhaps even desirable to confine the planting to luscious landscape plants; at least some evergreens as well as plants that cling to colorful (but not necessarily edible to humans) berries carry that front-door welcome mat through the year.

REPEATING ELEMENTS

Rhythm in a landscape comes from a congenial repetition of visual patterns, the patterns themselves resulting from visual harmonies and accents. At its best, homogeneity creates harmony, the effect of which is to unify the scene and imbue a calm that says "everything is in its rightful place." At its worst, when used to excess, all that harmony becomes downright boring, that calmness sidling over into monotony. Picture an expanse of lawn or a long hedge of the same plants, each trimmed just like its neighbor; at some degree both of these scenes become, well, boring.

Accent has the opposite effect of harmony. Visual accent results from contrast, or from some plant or object garnering particular emphasis. At its best, accent is like spice in cooking—it makes things interesting. Used to excess, the result is visual exhaustion and confusion. This time, picture a backyard planted randomly with a gaggle of weeping cherry trees, each, because of its dramatic form, calling attention to itself. Now contrast that boring hedge or that visually exhausting cherry scene with a vignette that combines a moderate expanse of trimmed hedge with an interplanting, at regular or increasing or decreasing intervals, of those weeping cherries.

A BALANCING ACT

Whether or not the scene you're looking at is a success also depends on that third element: *balance*. Is there equilibrium in what you're looking at on either side of some clearly defined or implied axis? Balance need not imply formality. Formality results from mirror-image plantings on either side of an axis, but equal-"weight" plantings, without symmetry, can also be in balance: One large tree, for example, may be counterbalanced with a smaller tree and some supporting shrubs.

Rugosa roses (*Rosa rugosa*) planted on both sides of this brick walkway create visual balance and help lead visitors onward down the path.

Plants as Design Elements

If scale, rhythm, and balance create a pleasing scene, then what is actually responsible for that scale, rhythm, and balance that you see in a back or front yard? Plants, of course, as well as any structure, such as a house, garage, arbor, or fence, and perhaps a distant view and the undulations of the land itself.

Let's further distill the essence of what we see. What is it about plants or a fence or an arbor that actually creates that sense of scale, rhythm, and balance? It's the forms, lines, textures, and colors of those plants and structures. Generally, and especially if you consider the year-round effect of what you're going to be looking at, forms will have the most dramatic influence, followed, in decreasing importance, by lines, textures, and colors.

FORM

In addition to your house and other structures, *forms* are created by leafy masses of branches. The

massive old trunk of a tree can also do it, as can even leafless branches if they're sufficiently dense with twigs, as is the case with privet, barberry, Nanking cherry, and many other hedge plants. Unless there's a whole row of them, severely upright forms tend to be eye-catching as landscape accents, while rounded or spreading forms create more of a sense of peace, stability, and harmony. Consider both the sizes and the shapes of plants, then, so they fit in with the desired scale to create a scene that has a pleasing rhythm and balance.

LINES

Lines enclose spaces and carry our eyes along a landscape scene. A line might be created by a path, by a row of plants, by the edge of a shrubbery or woods with adjacent lawn or meadow, by the two-dimensional tracery of the tops of bushes against a backdrop, or by a fence. Any of these lines naturally draw our eyes along their length. At the end of a prominent line or at a prominent bend, consider putting a "treat," such as a sculpture, a bench, or a gate to a different part of your garden (or your neighbor's, even if the gate is not for actual use) or to some unseen—hence, mysterious—place. Straight lines carry us quickly, wavy ones more slowly, but each contributes to the rhythm of the landscape. A line might create that axis on either side of which we seek balance.

The low, spreading form of a flowering crab apple tree (*Malus* sp.) adds a graceful note to an ordinary backyard.

An Edible Hedge

TWENTY YEARS AGO, I DUG OUT FORSYTHIA BUSHES THAT I had carefully planted only a couple of years earlier along my driveway. Sure, the blossoms' warm yellow glow was welcome in spring, but once they faded, that row of plants hardly got a second thought. I replaced the forsythias with a mix of three fruiting shrubs: Nanking cherry, saskatoon, and European black currant (the last of these isn't particularly ornamental but did add to the verdant mass; in the illustration below, I've indicated red currants instead, and alpine strawberries as a ground cover).

Every spring for the past 20 years, my driveway isn't just a driveway. It's a bold line in the landscape, one that's drenched in cheery, pinkish white blossoms. In contrast to those forsythias, this hedge does get a second thought, this time in early summer, when the branches drip with plenty of cherries to satisfy me as well as the birds and squirrels.

Before ripping out your forsythia hedge or planting a fruiting line, consider some practicalities. Don't plant too densely or allow spreading plants to grow too densely, especially in sites with less than full sunlight, or the plants will shade themselves out of productivity and become more prone to diseases. Where winter brings snow and ice, room is needed along at least one side of a driveway to pile snow. And if you ever use salt to melt ice on your driveway, choose fruiting shrubs that are most salt-tolerant; these include autumn olive, beach plum, gumi, rugose rose, and probably currants. Hedges often look best when they are uniform, which means limiting them to a single species, perhaps even variety. Just a warning: That could be a lot of fruit, and at one time!

TEXTURE

Texture enters the picture in the brawniness or delicacy of branches and the arrangements, sizes, and shapes of the leaves. A single fruit species, mulberry, provides an example of either end of that spectrum. The delectable black mulberry (*Morus nigra*) has few, thick branches; compare this with the fine, relatively dense branches of the tasty (but not nearly as delectable) red mulberry (*M. rubra*), white mulberry (*M. alba*), and their hybrids. Small leaves create the appearance of finer texture, but this effect can be modified, even negated, if those leaves are far apart. And larger leaves take on a finer texture when they are incised, as is the case with the ferny leaves of the 'Laciniata' variety of European beech.

Bold-textured plants generally look more at home in a larger space, but in any space, don't dull the scene with all plants of similar texture. Changes in texture add to the rhythm of the scene, although less dramatically than do changes in form. The bold texture from robust stems or a stout trunk, for example, can be an eye-catching accent. And where the eyes need a rest, turn to finer-textured plants, lawn being the ultimate for that calming expanse.

Plants with bold foliage, like this fig tree, can lend a subtropical feel to their surroundings.

THE LIGHTNESS OF A COLOR CAN APPEAR ALTERED BY THE GLOSSINESS OF THE SURFACE, ONE REASON THAT GLOSSY PEAR LEAVES, FOR EXAMPLE, APPEAR TO BE A LIGHTER GREEN THAN THE MATTE LEAVES OF APPLE.

COLOR

Finally, we come to *color*. This design element takes a backseat in this book because we're dealing with trees, shrubs, and vines, all plants whose most dramatic impacts on a landscape are from their forms, their textures, and the lines they create. Still, fruit plants offer color of varying impact: Witness the subtle, silvery leaves of gumi and shipova; the striking red bursts of color from Nanking cherry and cornelian cherry fruits; and the dramatic, early spring pink shower of blossoms garlanding peach branches. So let's take at least a quick tour through the use of color in the garden.

Any talk about color begins with the *color wheel,* a circle around whose edge lies, spaced equally apart, the colors red, yellow, and blue. These three are the primary colors, from which all other colors derive. Secondary colors come from the mixing of any two adjacent primary colors, so between red and blue we find violet, between red and yellow we find orange, and between blue and yellow we find green. Dividing the wheel in half separates it into warm and cool colors: green, blue, and violet on the cool side of the line and yellow, orange, and red on the warm side. All the cool colors have a blue undertone and evoke, besides coolness, detachment, stability, and calm. The hot

colors have a yellow undertone and express, besides warmth, comfort and liveliness.

The essence of how color works is fairly straightforward. Colors adjacent to each other on the wheel harmonize and those across from each other contrast. How much they harmonize or contrast depends, respectively, on how close or far they lie from each other. Create a pleasing rhythm in the landscape using mostly harmonious colors enlivened by occasional contrasting colors. White results from a combination of all colors, so it blends beautifully with all and forms a nice bridge between colors that might otherwise contrast. Color balance is achieved either when the same colors are present on both sides of an axis or when the colors on both sides are of equal "eye-catchingness."

Out in the real world, don't expect colors to fit in to such neat categories and preordained easygoing or temperamental relationships. Darkness or lightness of a color, for instance, tweaks categories and relationships. In bright sunlight, cooler and lighter colors fade into anonymity, so don't expect a lively show from otherwise awesome, pale blue passionflowers in midday sunlight. What's needed to hold its own in regard to color in such light is something like the fire engine red fruits of certain varieties of kaki persimmons. Those cooler colors and lighter colors are, then, the most harmonious and restful—or boring, if used to excess or in a situation where they're hardly noticeable. The lightness of a color can appear altered by the glossiness of the surface, one reason that glossy pear leaves, for example, appear to be a lighter green than the matte leaves of apple.

The red foliage and purple fruits of this grapevine demonstrate how contrasting colors intensify each other.

In winter, rose hips add a bright spot of color to a snowy landscape.

Hot pink peach blossoms light up the spring garden and offer luscious fruits later in the summer.

Color, especially flamboyant color, typically and most appropriately takes front and center stage in the cottage garden or the garden with tropical aspirations. Those gardens excepted, no matter how much you plot and plan, the most pervasive color year-round in the garden will be green. Not that green is boring, of course, because a wide range of greens exists, even in fruit plants. Among luscious landscape fruits, consider the dark green foliage of medlar, the bluish green leaves of persimmon, the grayish green leaves of gumi, and the glossy green leaves of pear.

Many fruit plants are flamboyantly colorful in spring. At that time, any color is so welcome, even if it's fleeting, that paying too much attention to the precise color characteristics of the plant and its neighbors may be superfluous. Come spring you might want to just sit back and enjoy that evanescent

dazzle of color. And then, in autumn, close the season with more bursts of color from, for example, the orange-tinged yellow leaves of Korean mountain ash, the flaming scarlet leaves of Juneberry, and the pure golden yellow leaves of pawpaw.

Foundation Planting with Color and Texture

THE OSTENSIBLE PURPOSE OF THE EVER-PRESENT foundation plantings is to hide the foundation, even though many homes lack the raised foundation that people are trying to hide. More important, foundation plantings smooth the visual transition between the upright walls of a house and the adjacent flat ground.

The conventional planting of standard evergreen bushes along a home's foundation presents an opportunity for color, texture, and good flavor. For starters, that planting doesn't have to be the usual gaunt line pressed against the house; try expanding it into a generous bed a few feet deep. This will provide plenty of space for a variety of plants, both edible and ornamental.

Anchor the corner of the bed with a small tree—in this case, a Juneberry, which provides a graceful form throughout the year, as well as luscious fruits in early summer. For something even more ornamental, perhaps try a stewartia, which, although deciduous (and not edible), would be pretty in winter for its mottled bark.

Although the mountain laurels and heathers also don't provide edible fruits, they do lend the scene an evergreen presence, as well as color early in the season. The heathers burst forth with pink or white flowers in early spring, depending on the variety, and the mountain laurels are covered with porcelain-like white blossoms in late spring.

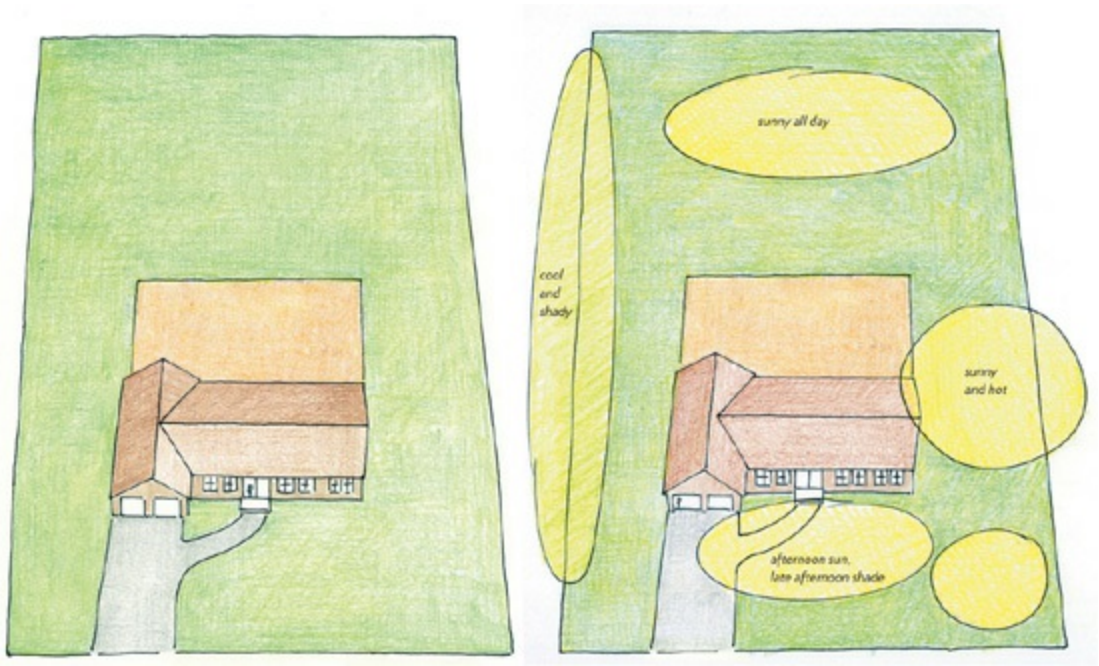
And now for some flavor as well as good looks: All of the intervening space is filled in with the creeping stems of lingonberry (small, but not needled, evergreen leaves and persistent red fruits in autumn) and lowbush blueberry (red leaves in autumn and red stems in winter), both with dainty, white flowers in spring.

Site Analysis: What You Have, What You Want

Before either tweaking an existing landscape or designing one from scratch, stop and take stock of what's there, what you have to work with and around. And then—still before considering any planting schemes—make an assessment of what you need from the site in terms of appearance, function, and "pleasure ground," an archaic but apt designation of a garden whose purpose is to provide relaxation and enjoyment.

On most properties, the house itself makes the boldest impact on the landscape. If your house has a distinctive style, you may want to figure that into your plantings: clipped hedges and mirror-image planting for a formal house; organic forms, loosely defined edges, and rustic fences and trellises for a cottage; geometric-shaped plants juxtaposed with occasional free-form sculptural plants and gravel underfoot for a modern house. Or, if you're less than enthralled with the look of your home and more excited by gardening, you might opt to make the house blend in among well-placed trees, shrubs, and vines. Perhaps your house also has a number of associated features that are candidates for change: a driveway and paths, fences, walls, a patio or deck, a swimming pool.

Next, look to your property boundaries and beyond. Perhaps you'd rather not see your neighbor's new pink garage or some other sight beyond your property line. Take note of that. And few of us have landscapes so unbounded that size is not an issue. Our plots of land have boundaries, and within those boundaries we want to squeeze in certain practical and aesthetic amenities. How fortunate, then, that even though our yard and outdoor rooms are fixed in size, our eyes can succumb to perceptual tricks that make it possible to visually shrink or expand a view, to some degree, to suit our needs.



Many new homeowners faced with a relatively blank landscape aren't sure how to begin planning. One simple way to start is to analyze where the sun falls in the yard at each time of day, in order to match each plant with a site that offers it the proper exposure.

In taking stock of what you have, also take a good look at your existing plants. Many a new property owner is surprised to become the guardian of a neglected old pear tree or grapevine coughing forth a few hidden fruits. It may or may not be possible, or worthwhile, to bring such a plant back to its former glory. Be objective in assessing the quality of the fruit, taking into account the

neglect the plant has endured and the "rose-colored" palate with which you, like any other homeowner, savor your own backyard fruits. Some old plants never had any former glory. Consider whether you really want a plant where one already grows, as well as whether you really want to grow that particular fruit.

DRAFTING A PLAN

Depending on the extent of your planting, at this point you may want to do some rough sketches to make yourself more aware of what's out there and about how big it is. Pencil in permanent features in the landscape, worthwhile existing plants, and views you'd like to emphasize or hide. Also incorporate into those sketches the location of your leach field (if you have a septic system), as well as any utility poles.

No yard is all pleasure ground, so also consider what you want from your yard besides beauty. List those needs on a sheet of paper. We're going to make fruit plants part of that beautiful landscape, but what about vegetables? You could plop a vegetable patch in an out-of-sight back corner, incorporate certain decorative vegetables into the landscape, or create a vegetable garden that is attractive in and of itself. How about a flat lawn area for volleyball or badminton, maybe an area for swings and a sandbox? Most homes also need a service area for a driveway and garbage cans; perhaps compost and a clothesline; a dog, chicken, or other animal house.

We all enjoy some privacy, even on our home ground. If you enjoy yours outdoors, put it on the list even if you have yet to choose that special spot. That private retreat could end up anywhere, given the possibilities of shrubs, trees, fences, and walls.

Rough into the sketch any of the service areas that are already in place and immutable. Depending on the scope of your landscape makeover, such areas most likely include the driveway and the paths to your front and back doors.

Planning Tips

Check soil conditions right near your home before planting there. Debris buried there years ago during construction could create nutrient and pH conditions quite different from those in the rest of your yard. Also check for moisture differences: too much because of a gutter downspout, for example, or too little because of overhanging eaves.

Plant fruits that are most perishable and harvested most frequently—blackberries and clove currants, for example—closest to your kitchen or back door. This makes it a snap to run out for a snack or a meal.

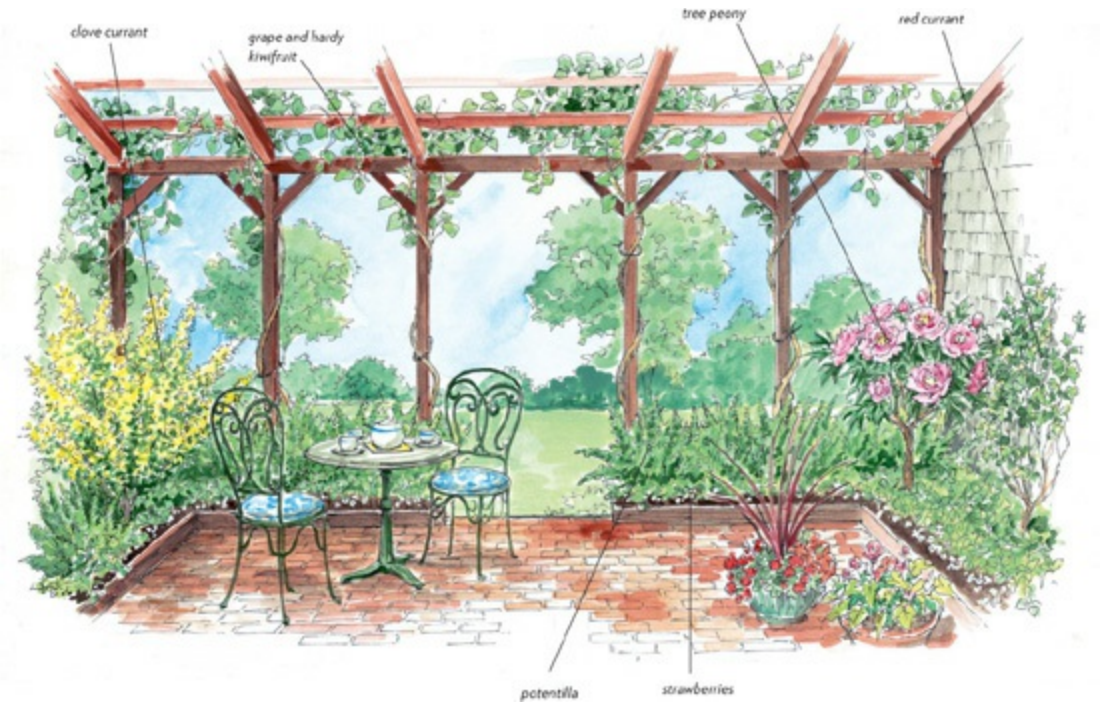
Keep messier fruits away from driveways, patios, walkways, and frequently used lawn areas. Such fruits include apples, nectarines, pawpaw, peaches, pears, persimmon, plums, and shipovas. They all tend to drop when ripe and make a bold statement when they hit ground. Mulberry fruits don't splat from gravity or being stepped on, but there are so many of them that they're best kept away too.

I LIKE TO KEEP THE MOST "CIVILIZED" LANDSCAPE AREAS closest to my home (although someday a gazebo might provide a civilized retreat somewhere out in the "back 40"). This preference begged for a very civilized "room" just outside my living room's sliding doors.

This room, like other garden rooms, has a floor, a ceiling, and walls. The floor, in this case, is about as civilized as you can get: brick. The corner of two house walls form two of the outdoor room's walls, and a line of potentilla bushes create a third, low wall that opens out to a lawn across which sit and vegetable gardens.

A room needs four walls, and the fourth wall of this one is a mixed bed of tree peony, one end of the potentilla row, and clove currant. Besides tasty berries, the clove currant's yellow blossoms perfume the terrace each spring.

In winter and early spring, the roof is mostly sky. Later in spring, leaves sprout from the grape and hardy kiwifruit vines that climb the cedar arbor overhead to create a sky-dappled roof and then a sun-dappled brick floor. Fruits dangle, ready for picking, from the undersides of the roof from late summer through mid-autumn.



Putting It All Together

If it's just two or three fruit plants that you're going to nestle in among other strictly ornamental trees and shrubs in your yard, mentally review any considerations in site selection and design, then go ahead and grab a shovel and plant. If, on the other hand, you've got a grander plan, you'll likely want to start with scale drawings, perhaps a bird's-eye view as well as more true-to-life ground-level views ("side elevations") from selected vantage points. Use a scale of ⅛ inch to ¼ inch to represent every foot outdoors, the former for larger gardens. Later, if you enjoy committing finer details to paper, draw up selected portions of your yard to finer scale, such as one inch per foot.

Include in your drawings all permanent site features, all to scale, such as, most obviously, the

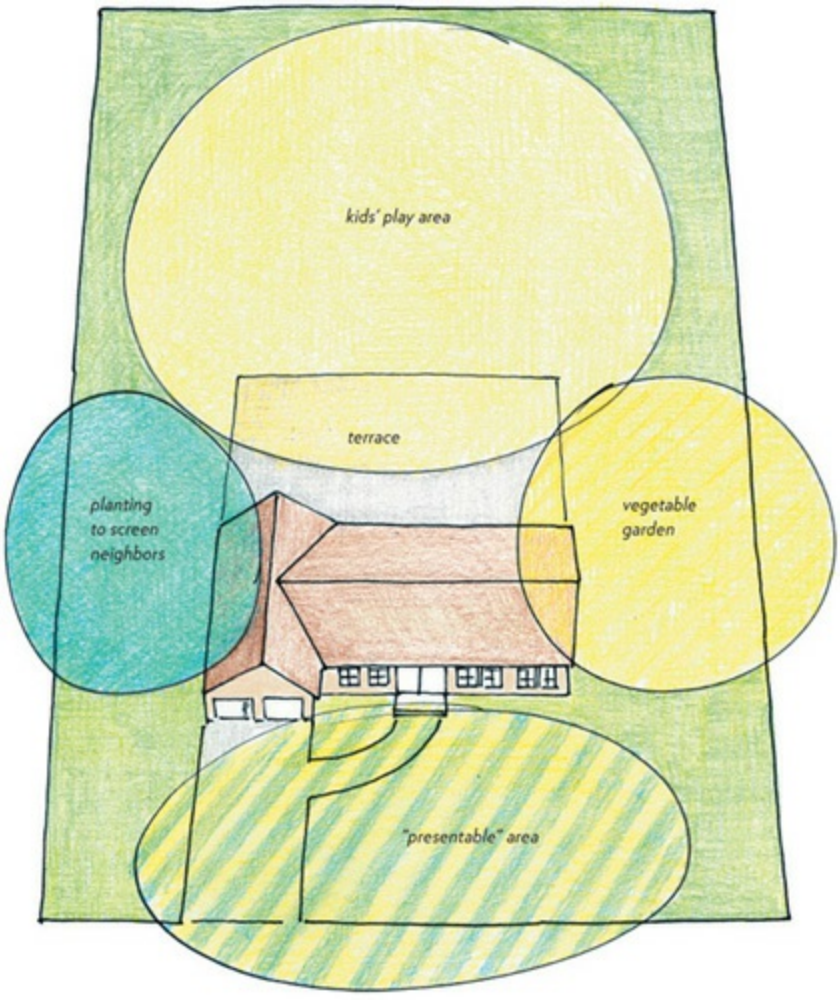
house, but also the garden shed (assuming it's permanent); utility poles; your arbor, deck, and garage; even the barbecue pit, if you have one. Sketch in, to scale, large permanent trees, shrubs, vines, and boulders. Also indicate any dramatic changes in elevation.

Enlargements of black-and-white photographs can be very useful. Vantage points for those photos might include the approach to your house or property, as well as views from the street, from a window inside of which sits a comfortable chair, and from your patio or deck—some of the most common spots from which you'll be looking at and enjoying the view.

Now get some tracing paper so you can overlay your drawings and begin sketching landscaping ideas. Don't be stingy with the tracing paper, because you'll probably try out more than one version of your design; plenty of tracing paper will help keep you from becoming prematurely wedded to one plan.

AN OVERALL VIEW

Start at the most basic level of design, sketching out general areas—those for playing, for growing vegetables, for composting, for merely sitting—on the tracing paper, taking into consideration practicalities like proximity to the kitchen door as well as aesthetics, such as good views. Draw a rough outline—a roundish bubble—encompassing each of these areas, and label each. Don't be averse to putting your "bubble diagram" aside and starting one afresh. Add written notes, as needed. Evaluate your diagram(s) in terms of whether areas are well suited to their intended uses, whether each area is approximately well sized, and whether each area relates well to adjacent ones functionally and aesthetically. For me, for instance, a vegetable garden and a terrace are inexorably linked to a kitchen door that preferably opens to the south or west.



Before selecting plants, it's a good idea to first evaluate how certain parts of the yard will be used.

Especially with a larger property, it makes sense to keep areas most frequented (the vegetable garden, for example, in my yard), those needing a watchful eye (such as a children's play area), and those that are otherwise most cultivated (in a horticultural or a civilized sense) closest to the house. You might plan for mowed lawn around your home, then, farther out, meadow that's mowed but once a year with, perhaps, a mowed path or paths meandering into it.

As you work up bubble diagrams, also think about and pencil in traffic patterns and how they tie together the various areas. Those most heavily trafficked areas are going to warrant some sort of paths. Not all paths are going to be functional or the quickest route from one area to another, though. A path could take you up to a gate that seemingly opens onto an enticing meadow, except that the meadow happens to be your neighbor's. An appropriately placed bend in a path might be just the place to slow down and take in a view or appreciate a small planting or ornament.

Once the bubbles are functionally and aesthetically positioned to your satisfaction, start thinking of what floors, walls, and ceilings are going to help define each of these "rooms," even if the "ceiling" is the sky and the wall is a vista. Those walls can also be used to direct your gaze or hide undesirable things from view. Creating "rooms" helps you to visually take in your surroundings and lets you break the design into more bite-sized pieces. A room might be quite enclosed, as, for instance, my brick-paved terrace, sheltered overhead by a grape arbor roof and on the sides by low walls of shrubby potentilla. Or, a room could be more suggested than explicit, as, for example, a mounded area or hill with open sky as the ceiling, its walls implied by the falling off of the ground, and grass underfoot. Both rooms are connected to other rooms, the terraced one through window and door openings in the shrubbery and the high-point room by whatever can be seen from that vantage point. Dumbarton Oaks, a public garden in Washington, D.C., is among the best demonstrations of this technique: The designer Beatrix Farrand so effectively broke the hilly five acres (surrounding a stately Georgian mansion) into a number of garden rooms that each not only stands alone but also integrates seamlessly with others from those vantage points that allow more-general viewing. As you walk downhill on the path toward an ellipse of hornbeam trees, as an example, you can catch glimpses of forsythia tumbling down "forsythia hill" forward to your left and a colorful, self-contained garden of perennial flowers to your right.

SCULPTING THE DETAILS

I like to picture the design process from this point forward akin to carving a sculpture from a block of wood. Progress from those bubbles to more-detailed delineations of areas, but don't deal with any finer details until everything has been carved out at the grosser level. Rough in forms that could be derived from shrubs, trees, arbors, walls, and fences as well as any land forming you plan. Only the sizes and masses of plants are important at this stage. Use these forms to create pleasing rhythm, scale, and balance for each view and room, and only then move on to considerations of line and then texture. Set those black-and-white photographs on a table, cover each with some tracing paper, and rough in those forms in order to see the scene from more of a real-life vantage point. Once you're pleased with the forms, start exploring the possibilities for specific plants, and think about their light and soil requirements. Not all plants in a luscious landscape need to be edible. Skip plants that drop messy or soft fruit near a driveway, walkways, decks, and terraces. Also consider materials and

designs of walls, paving, and arbors.

Edibles for Intimate Planting

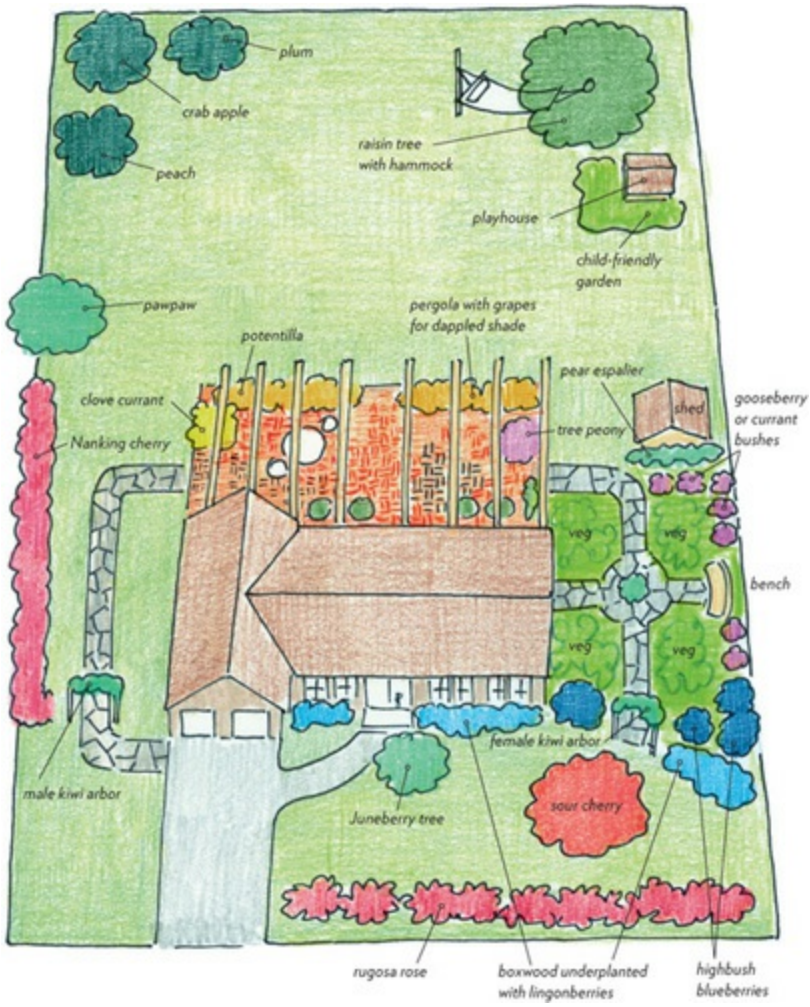
ONCE YOU HAVE MOST OF YOUR LANDSCAPE IN ORDER, OR AT LEAST planned out, start thinking about those luscious landscape fruits that are best appreciated at the most intimate level—that is, plants whose fruits will never inundate you but which are doled out in relatively small amounts, just right for nibbling as you walk past them. Or plants that look best up close. Or plants that are fragrant.

So here are the settings for some of my intimates (plants, that is). A clove currant stands prominently—actually trained as a *standard*, or small tree—near my terrace to perfume the area in early spring and then offer dark currants ripening over a long period through summer. Alpine currants line the path in my main vegetable garden. And finally, a bed raised behind a stone wall around the front of my house puts lingonberry blossoms more in view as I walk up the front path and makes picking the red berries, ripening in summer continuing well into autumn, convenient.

Other luscious landscape fruits ideal for intimate settings are gumi, lowbush blueberry, and wintergreen. Gumi yields well, but is best close at hand because the fruits themselves are so pretty up close and because you're more likely to be close at hand for that narrow window of time between the fruits' ripening and dropping and their otherwise disappearing.

By now, you've progressed from general forms to specific plants and their locations. Don't be shy about reevaluating the design and the plants in light of your aesthetic and functional needs. Changes are still easy: Plants, walls, and arbors are more quickly and easily moved with a pencil and eraser than with a shovel and wheelbarrow. At some point soon, step outside and pound some stakes into the ground to represent and help you visualize your trees-, shrubs-, and vines-to-be.

If you feel overwhelmed somewhere among the initial scale drawing, the bubble diagrams, and the more-detailed drawings, you're right on track. There's a lot of information to put together, but once you have the grosser plans formulated, increasing detail can be taken care of bit by bit. You have some guideposts, you have your information, and you have some sketches. Now let it all out, from your gut. Make it fun and don't feel that whatever you do must be writ in stone and perfect.



After the site evaluation is complete, you can begin to choose plants according to your appetite for fruit as well as your aesthetic tastes. You can choose to fill the yard entirely with edible plants, or selectively blend them into ornamental plantings.

Permaculture

LUSCIOUS LANDSCAPING WITH FRUITING TREES, SHRUBS, and vines is part of a broader system of ecological design known as *permaculture*. The word and the system were the 1970s brainchild of University of Tasmania lecturer Bill Mollison and his student David Holmgren. Permaculture seeks to integrate not only fruits and other edibles into a site plan, but also other resources and their cycles. In the words of Bill Mollison, "Permaculture is about designing sustainable human settlements. It is a philosophy and an approach to land use which weaves together microclimate, annual and perennial plants, animals, soils, water management, and human needs into intricately connected, productive communities."

Chickens, for instance, might be included in an overall plan to help control insect pests as they scratch up the ground, which, in turn, might be thus prepared for planting as the poultry gets nourishment to also provide eggs for food. Sunlight could be captured not only by plants, but also, as it falls on your roof, by photovoltaic cells to provide electricity that might be used for, among other things, pumping water for garden plants growing in that ground prepared by those chickens.

In this whole-systems approach to design, landscape fruits would be valued not just for their tasty

nourishment and beauty. They would be valued also for the shade they create to keep a terrace or home cooler in hot summer weather, for the nourishment their fallen leaves bring to the soil, and for the support they offer to wildlife, including beneficial insects. That is, these fruiting plants contribute to the landscape's webs of life and overall sustainability.

Nature is the template in permaculture. As such, it seeks to broaden the diversity of plants and animals. Such biodiversity lessens the threat of crop failure (because there are so many different crops!) and even lessens the chance of pests finding their target plants. Nature abhors a vacuum; permaculture likewise aims for a rich assortment of ecological niches by, for instance, underplanting trees with shrubs, which, in turn, are underplanted with ground covers—and, perhaps and when appropriate, "seeding" edible mushrooms in the mulch. The experience of going out to harvest some lettuce for a salad or blueberries for dessert would not entail walking out to the vegetable garden to find that row of lettuce, or walking out to the blueberry patch. The experience would be more like that of the primitive hunter-gatherer plucking lettuce leaves from among other shade-tolerant plants beneath the canopy of some tree, or sidling into a mixed planting of shrubs to get to the blueberry bushes.

Permaculture requires an intimate knowledge of the locale, the land, and the plants. Nature is emulated but not left totally to her own devices. Undesirable plants—weeds, in other words—must be kept in check, and growth of even crop plants usually can't be left unchecked if a balance is going to be maintained among them.

Permaculture is not an all-or-nothing proposition. It might be practiced on a home site, in a small community, in a village, or on a larger scale. You could let part of your lawn go to meadow, in which grows Queen Anne's lace, yarrow, and other plants attracting beneficial insects, and install solar panels on your roof to provide free hot water. And you might redesign part of your front yard to incorporate some trees, shrubs, and vines that provide luscious fruits in addition to beauty. That is, you might be practicing some degree of unplanned permaculture already.

Permaculture is a method of landscape design that treats each landscape as an interconnected system of ecological niches. In addition to edible plants for humans, permaculture-based designs also provide shade for homes, food for wildlife, and habitat for beneficial insects. This plan was designed by Ethan Roland and Rafter Sass of Appleseed Permaculture.

RENOVATED ECOLOGICAL ORCHARD
BAMBOO ISLAND
POND FOREST GARDEN
PAWPAW ORCHARD & MUSHROOMS
CHICKEN YARD
DRIVEWAY
PATIO
PATIO
NORTHERN FOREST GARDEN
hardy kiwi
phyllostachys
mulberry
guava
clove currant
coppice garden
highbush blueberry
raspberry
elderberry
Schuette's sweet acorn oak
hybrid persimmon
raisin tree
Asian pear
che fruit
hardy kiwi
seaberry
pea shrub
hybrid persimmon
hazelnut, chestnut, Nanking cherry hedge
American persimmon
Asian pear
seaberry
che fruit
hybrid persimmon
moral mushroom patches
maple
raspberry patches
salads, herbs & edible flowers
sandraberry, maypop & hardy kiwi arbor
greenhouse
pea shrub
azalea
hybrid persimmon
pea shrub
annual & perennial vegetable beds on contour
fig
hardy kiwi
Asian pear
hardy kiwi
American persimmon
guava
hardy kiwi
pea shrub
hybrid persimmon
hybrid hazelnut
Chinese chestnut
Nanking cherry
shaggy mane mushroom patch
apple
gooseberry
black currant
saskatoon
seaberry
farm stand
rugosa rose
clove currant
guava
phyllostachys bamboo
saskatoon
guava
pea shrub

If you’re going to plant only one tree, why not make it a luscious landscape plant? Pawpaws offer bold foliage, delicious, custardlike fruits, and great fall color.

One of the toughest plants around, hackberry will thrive in just about any site. Its fruits are small and sparse, but sweet.

Because they open early, peach blossoms can succumb to late frosts and are best planted on northern slopes that warm up more slowly in the spring.

CONSIDERATIONS IN PLANTING

WITH HEROIC ENOUGH EFFORT, YOU CAN GROW ALMOST ANY PLANT, EVEN A fruiting plant, anywhere—as attested to by a guy I know of in Finland who grows and fruits banana plants indoors! Still, if you match your plants to your site conditions, adjusting growing conditions as necessary, you'll have an easier time growing your fruit trees, shrubs, and vines. To maximize your enjoyment, you'll also want to match your planting to your palate and your level of enthusiasm. Who knows? After all this consideration, you might also decide to grow indoor bananas. (I tried for a number of years, then abandoned the idea before ever getting fruit. I couldn't bear the sad look of my plants as they lumbered along through winter in my home's dry, cool air as compared to their lush counterparts I saw thriving in steamy, tropical landscapes.)

Climate Assessment

Most important in determining just what you can grow outdoors is climate, and the most important aspect of climate is winter cold. Simply put, different plants tolerate different minimum temperatures, below which a plant is either killed outright or killed back enough to prevent its fruiting.

The first step in assessing your climate is to find out just how low you can expect temperatures to drop each winter. The U.S. Department of Agriculture (USDA) has conveniently compiled our average winter minimum temperatures onto a map of the country, the USDA Plant Hardiness Zone Map. This map, now familiar in gardening magazines and books, overlays the United States and southern Canada with squiggly lines that break up the continent into one of 11 hardiness zones based on differences of 10°f in average annual minimum temperatures. The lower numbers correspond to the colder zones. Where I live, the mercury plummets, on average, to between –10 and –20°f, putting my yard in USDA Hardiness Zone 5. The original map was issued in the 1960s and was updated in the 1990s to include more-recent weather data (possibly inducing me to try growing hardy camellias). Turn to the USDA Hardiness Zone Map on page 178 to find your zone.

You could, of course, just ask some neighbors, preferably those who garden, how low they think temperatures usually drop in winter. The key word here is *think*, because unless you have a neighbor who revels in the exactitude of a well-placed thermometer and then enjoys trudging outside in the wee hours of the morning to check it (or has a thermometer that automatically records the minimum temperature measured for a given period), you're not likely to get a valid figure. The local Cooperative Extension Service or other agricultural office can also tell you your cold hardiness zone and other local conditions.

CHILLING HOURS

Winter cold is a two-edged sword: The degree of cold sets limits, but so can the *lack* of cold. Most trees, shrubs, and vines of temperate-zone climates need a period of cool weather before they can come out of their winter sleep to resume another cycle of growth, flowering, and fruiting. In this case, it's actually not cold weather that they need; rather, it's *cool* weather—that is, temperatures between about 30 and 45°f. Each species and variety of fruit needs a certain number of hours at these cool temperatures—think of it as depositing time into a "chilling bank"—before normal growth can resume. So while 'Liberty' and 'Jonagold' apples require 1,000 to 1,600 total hours of chilling before they can awaken, so-called low-chill apple varieties, such as 'Anna' and 'Beverly Hills', which are

adapted to southerly locations, need only 300 to 400 hours to coax them from their slumber. Once chilling hours are fulfilled, plants are ready to awaken, and will do so as soon as weather warms enough to spur growth.

All plants have a hardiness limit—the lowest temperature they can withstand without being killed. Most fruiting plants, though, also *require* a certain amount of cold in order to set fruit.

"Chilling" temperatures really are chilly, not frigid; frigid weather does nothing to help meet that chilling requirement, and can even remove some chilling units from the "chilling bank." So what about plants that come from very cold climates, typically at higher elevations or higher latitudes, where spring comes on quickly and warming progresses at a steady and reliable rate? Like plants adapted to warmer locations, these cold-climate plants also have low chilling requirements. They must get growth under way without hesitation for the upcoming relatively short growing season. The apricot is a plant from such regions, and it often performs poorly elsewhere because its short chilling requirements are met by midwinter, at which point, given some warmth, it's raring to grow. The young growth or flowers are nipped by subsequent freezing or frosty weather that commonly occurs in regions beyond the plant's natural range.

LATE FROSTS

Winter may be the most important aspect of your climate to consider before deciding what you can grow, but the other seasons also play a role. Spring frost hazard, as mentioned above, is a potential problem with most fruit plants, not just those with low chilling requirements, because of the particular

susceptibility of flowers and young growth to injury from freezing temperatures that can knock out the crop for the season. Most fruit plants bloom once a year. If those blossoms are killed by frost, that year's crop is lost. Spring frosts are most hazardous to fruit plants that blossom early and whose blossoming periods are spread out over a relatively short time. Spring frost hazards are least in regions near the temperature-moderating effects of the ocean or another large body of water. Such sites warm up more slowly and regularly in spring, cool down more slowly and regularly in autumn, and get neither as cold in winter nor as hot in summer as do other regions.

HEATING UP

With summer comes reliable heat, also a factor in what will fruit well. As with cold, heat is a two-edged sword. Too much heat rarely kills a plant, at least outright, but it can affect its general health and the quality of the fruit. Daytime temperatures that aren't excessively warm coupled with crisp nights are what bring McIntosh apples to their most flavorful perfection in Vermont. Too much summer heat is one reason, in addition to lack of sufficient chilling, that apples are not at their best in Florida.

On the other hand, a certain amount of accumulated warmth is necessary to bring any fruit to ripeness. Because of the moderating effect of large bodies of water, coastal areas rarely experience deep winter cold but likewise rarely get hot in summer. So persimmon trees, which are thoroughly winter hardy in the Pacific Northwest, may not ripen fruits there; summer temperatures stay too cool.

Because they need a long, hot summer to ripen their fruits, persimmon trees are best planted on a southern slope in the cooler parts of their range.

Alternate Zone Maps

If you're new to an area, or never paid much attention to the weather where you live (obviously your pre-gardening days), looking at the three main zone maps—the USDA Hardiness Zone Map, the AHS Heat Zone Map, and the Sunset Zone map—is the best way to get an idea of what to expect from the weather throughout the year. (Turn to page 178 to see the maps.)

The American Horticultural Society (AHS) has developed the Plant Heat-Zone Map, in which the country is overlaid with lines, this time delineating areas sharing the average number of days over 86°**F**. Why 86°**F**? Because that temperature was deemed the cutoff above which plants generally suffer heat damage, or at least do not grow their best. Just as on the "cold map," a lower zone number on the "heat map" indicates a cooler, in this case summer, climate. There are 12 heat zones, ranging from Zone 1 in parts of the Rocky Mountains experiencing less than one day over 86°**F**, on the average, to Zone 12 in the sweltering tips of Florida and Texas, where temperatures soar over 86°**F** an average of 210 days annually. Although you'll often see the cold-hardiness zone listed for plants in gardening magazines and books and on plant labels, you rarely—for now, at least—see listings of heat zones.

Heat zones are a new concept, so the range of adaptations of specific plants has not yet been honed as it has for cold-hardiness zones. It's also complicated because, for the purposes of landscaping with fruiting plants, it reflects two things: heat stress and fruit ripening. Hence, consider the heat zones listed in the encyclopedic section of the book to be tentative.

The editors of *Sunset* books and magazine have come up with yet another system of climate assessment, one that considers a region's year-round climate as a whole. This map is less specific as far as just how low the mercury plummets in winter or how high it soars in summer but more specific with details such as rainfall patterns, humidity, and soil types. The result is 45 climate zones for gardening, and because each zone represents a range of characteristics of climate, the ordering of the numbers is unrelated to simply winter cold or summer heat. Use this system by first finding your zone on the map, then reading the reference describing that particular zone.

MICROCLIMATES

Both plants and climate are too complex to fit into clear-cut climate zones. Moisture, both in the soil and in the air, plays a role in plant adaptation, with low moisture reducing a plant's tolerance to either temperature extreme. Duration and timing of heat or cold also affect how well a plant fares. You're more likely to see cold-blackened leaves following even a brief period of plummeting temperatures in early spring, because of succulent new growth, than in early autumn, when shoots and leaves have begun toughening up in anticipation of winter cold. Fluctuating winter temperatures wreak havoc on peach trees, apricots, and other plants native to regions where winters maintain a steady cold.

Despite the vagaries of the weather, the prospects for raising luscious fruits are good everywhere: Just choose plants that are adapted to your climate. You're also likely to be able to find microclimates on your property for fruits that are not perfectly suited to your climate.

Any parcel of land, from a 40-acre farm field to a quarter-acre lot, has *microclimates,* which are small areas where pockets of air and soil are colder, warmer, even more or less humid, than the general climate due to the influence of slopes, walls, and pavement. For instance, avoid planting

early-blooming fruits in a low-lying area. Radiation of heat from the soil on still, clear nights puts cold air, which is heavier than warm air, near the ground. That cold air flows downhill, collecting in low spots, to the extent that the temperature might be a degree colder for even a 10-foot drop in ground level (except that in this special situation, higher elevations mean lower temperatures—about 6°f per 1,000 feet). This temperature variation may not seem great until you consider that a plant's frostbitten blossom means you won't be biting into any fruits from that plant for the year (except with plants that blossom over a long period or repeatedly each year).

Orientation of the ground also creates a microclimate. South-facing slopes, which receive the full force of sun in the southern sky, are warmer in general and warm up earlier in spring than do north-facing slopes, which receive only glancing rays of the sun. So grow heat-tolerant (or heat-loving) plants that don't tend to start growth early (persimmon and jujube, for example) on a slope with a southern exposure. Grow plants that enjoy cooler summer temperatures (red currant) or whose initial growth begins so early as to be threatened by later frost (apricot) on a northern slope. North walls stay cooler year-round; plants near such walls also bloom later than those fully exposed or near a south wall.

Walls and fences can take the bite out of winter wind, and they also absorb and retain the sun's heat, especially if they face south and are made of a heat-retentive material such as brick or stone. Brick or stone walls radiate the heat they accumulate during the day, warming nearby plants. The same could be said for plants growing near the heat-absorbing surfaces of paved paths and terraces. Plants and soils in such microclimates also tend to dry out quickly (although deep-rooted plants near a wall can send their roots deep into moist zones near or under the wall).

With all this talk of north and south walls and slopes, I've neglected things east and west; they too have their own microclimates. Sites facing east are cool (though not to the extent of those facing north), basking in morning sun and then enjoying shade from the hot afternoon sun. Sites facing west are hot, though not to the extent of those facing south.

In warm climates, figs planted in the ground will grow to be full-size trees. Gardeners in colder regions must settle for smaller plants grown in very protected sites or in containers.

PUSHING YOUR ZONE

Numbers notwithstanding, few gardeners can resist pushing the limits of what they grow. Especially after a spate of warmer-than-average winters coupled with reports that natural global warming is being greatly augmented by human activity, many of us risk planting a tree or shrub that is not "supposed" to survive the rigors of the local winter. I know that figs are generally considered cold hardy only to Zone 8 or 9, but I couldn't resist planting in my Zone 5 garden 'Danny's Delight', an allegedly cold-hardy fig that has survived (but will it fruit?) in Zone 6 in Michigan. I'm growing this plant in the warmest spot I have, near a south-facing wall. ('Danny's Delight' is among the many varieties of common fig that set fruit on the summer's new growth, so the crop is never threatened by the late-spring frosts that would damage other fruits induced to early blossoming by this site.) Furthering the chances for success with this plant is the fact that the wall is brick, which absorbs heat by day and radiates it at night. I'm hoping this will keep the fig sufficiently cozy. In your yard, try seeking out microclimates for plants that are less than perfectly adapted to your general site.

WATER WELL

Fruits are mostly water (along with, in small but important amounts, nutrients and very tasty flavors and sugars), which highlights the importance of water in plant growth. Still, rainfall is not nearly as important a consideration in growing fruit plants as are the various ups and downs of temperature. That's because we usually have the means to irrigate when plants are thirsty. When irrigation is called for, the easiest (for you the gardener, because it's easily automated) and most efficient way to get water to plants is with *drip irrigation,* a method of watering that slowly puts water near plant roots. Drip irrigation works more in synch with how plants use water than do other methods of irrigation, and results in fewer weed and disease problems. You can also improve water- use efficiency by improving the soil.

Soil and Sun

Like rainfall, soil and sun are very important in determining whether you actually get to bite into fruits from the plants you put into the ground, even if soil and sun don't determine so much what you can or cannot grow. If your plants aren't getting what they need, sunlight or soil can be modified to suit them.

DRAINAGE

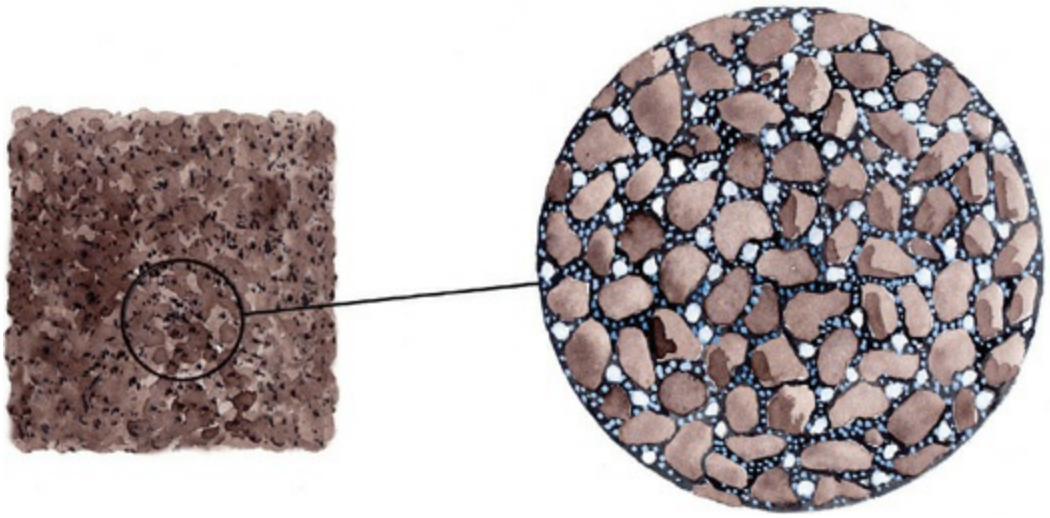
The most important consideration in soil is drainage, or aeration. Roots need air, which is held, along with water, in the many pores within a soil. When water fills too many of these pores for too long, roots suffocate. Pores become clogged with water either because the groundwater level lies too close to the surface or because water can't drain down and through the soil quickly enough.

Looking at existing plants or at the soil itself can tell you about drainage. Some wild plants that thrive in poorly drained soils are buttercup (*Ranunculus acris*), buttonbush (*Cephalanthus occidentalis*), cardinal flower (*Lobelia cardinalis*), cattail (*Typha latifolia*), horsetails (*Equisetum* spp.), Joe-pye weeds (*Eupatorium* spp.), purple loosestrife (*Lythrum salicaria*), rhodora (*Rhododendron canadensis*), sedges (*Carex* spp.), smartweed (*Polygonum coccineum*), winterberry (*Ilex verticillata*), and yellow flag (*Iris pseudacorus*).

Look at the soil itself by digging a hole 1½ feet deep by about 6 inches across. If the soil is mottled with areas that are rusty and bluish gray, drainage is probably poor. Pour water into the hole and wait for it all to drain out. Then pour water into the hole again and this time use a ruler to

measure how long before the water seeps out. If the water level drops more quickly than 1 inch per hour, drainage is good; a rate of ½ inch to 1 inch per hour indicates that the soil is moderately well drained and probably suitable for all plants except those that demand perfect drainage. A seepage rate of less than half an inch per hour indicates poor drainage.

Drainage and water table can vary through the year, and poor drainage is much more damaging when the weather is warm and a plant is in active growth. Whatever the cause for poor drainage, the situation can be corrected with drainage ditches or pipe, or by planting atop wide, built-up mounds of soil. Sometimes a wiser alternative is just to select another site.



Well-drained soil is filled with air pockets, which keep the soil from becoming waterlogged.

SUNLIGHT

Last but far from least in site considerations is sunlight. Producing sweet, juicy fruits takes a lot of plant energy, and plants get their energy from the sun. "Full sun," defined as six or more hours of direct summer sunlight daily, is what most of these plants need to bear reasonable amounts of good-tasting fruits. Sunlight also influences disease incidence because most diseases thrive in the moist, humid conditions more prevalent in shade. Observe the sunlight patterns on various parts of your property through the year. Note where the sun rises and sets in the different seasons, and where and how much shade is created. Sunlight falling on your property is, in theory, often amenable to change—with a chain saw!

A few fruit plants, such as currants, thrive in some shade. Normally sun-loving plants often demand some shade to avoid fruit sunscald where summer sunlight is intense or to keep cooler where summer weather is hotter than they like.

If there's a fruit that you just must grow, and the place where you absolutely must plant this fruit is bright but doesn't receive the requisite "six hours of direct summer sunlight," you may want to try planting it anyway. Just keep a close eye out for diseases and expect lower yields.

A FEW FRUIT PLANTS, SUCH AS CURRANTS, THRIVE IN SOME SHADE.

Personal Assessment

We're at the point now for you to look inward to understand what you *should,* rather than *can,* grow.

Do you want pretty plants for which you'll do nothing more than step outside to harvest, or do you also get satisfaction from having to periodically snip a few branches here and there and to keep an eye out for that occasional insect pest? That is, do you enjoy growing plants and watching them respond to good cultivation? Either end of this spectrum is feasible, and everything in between, although the variety of fruits that end up in your fruit bowl will, of course, be directly related to the time and effort you're willing to expend. Realistically assess how much time and effort you can pleasurably devote to growing these plants. You can get a good idea of the expertise and effort demanded by a particular fruit in your region by looking at the plant guide, starting on page 73, especially the Luscious Landscape Index. You might even think about what gardening activities—planting, pruning, mulching, harvesting, pest patrol—you particularly enjoy or dislike.

Timing and good looks. Once you and your household arrive at that realistic assessment of the time and effort you could enjoyably spend with your plants, think about what you like and don't like as far as plant appearance and fruit flavor, because that's what the plants in this book mostly offer. If there are certain periods of the year when no one is at home, select fruits that don't ripen during that time of absence. If you enjoy a particular view in winter, select fruits that present an attractive form or bark in that season. Juneberry, for instance, looks pretty in winter with its neat form and charcoal-striated gray bark, and its fruit is ripe for a brief period in, of course, late June (and early July). If you take a trip for a few weeks after school lets out for the summer, I guarantee you won't eat any Juneberries.

Perhaps bare branches bursting into small pompoms of color are what gets your blood going in spring. Peaches fill this bill, as do apricot and nectarine trees. No need to narrow your choices to particular kinds of fruits at this point; for now, just be clear on what you like and don't like, and *when* you'd like what you like. And there's no reason to ignore your other senses: If your idea of heaven includes something fragrant, you'll be able to find a plant to satisfy that craving. Clove currant is one of my favorite olfactory treats. In the stupor of its blossoms' sweet, spicy aroma, I find outdoor work near the bush pleasantly difficult during its couple of weeks of bloom.

Flavor. One of my brothers particularly relishes berries. Some people prefer sinking their teeth into crisp fruits; others like a puddinglike texture. Most people enjoy sweet fruits, but a friend of mine has a definite preference for tart ones. All this says nothing of the aromatic components of flavor, which are best experienced firsthand—not easily accomplished with some of the more uncommon fruits included in this book. Read my descriptions of the fruits' flavors in the encyclopedia section and try to find somewhere to taste the fruits to help you decide which ones to grow.

Harvest possibilities. Consider also how you and your household eat fruit. Almost a century ago, the British writer Edward A. Bunyard (in *The Anatomy of Dessert*) declared gooseberry "the fruit *par excellence* for ambulant consumption." I agree, and that's how my gooseberries get consumed, although one year's bumper crop did inspire me to harvest some also for the kitchen and attempt jam; the result was a runny, purplish gray goo of indistinctive flavor. Nanking cherry bushes—which, in contrast to gooseberries, are borne on highly ornamental bushes—are similarly ideal for ambulant consumption, and I have enjoyed them from along my driveway in season as I walk to the mailbox or when I used to join my daughter in heading out to wait for the morning bus when she was of school age. Hardy kiwifruits and pears are another matter: Some I consume in passing, but the bulk I carefully settle into containers and boxes in the refrigerator or cool mudroom for eating in the weeks following harvests.

Clockwise from lower left: **Espaliers are beautiful but labor intensive. The fascinating, textural bark of the hackberry tree holds its own in the winter landscape. In addition to edible hips, rugosa roses produce gorgeous, fragrant blossoms.**

Alpine strawberries (left) can be harvested during their first growing season, whereas shipova trees (right) can take as long as eight years to produce fruit.

Do you want fruit that hangs long on the plant, letting you harvest at leisure (American persimmons and grapes, for example), that you'll grab in handfuls as you walk by (blueberries and those Nanking cherries), or that you'll harvest almost completely at once (hardy kiwifruits and European pears)?

Perhaps you enjoy spending time with fruit in the kitchen, cooking and spicing up these simple

delicacies into things more refined: jams, pies, fools, and tarts. Or maybe you like preserving them in jars, through whose glistening glass oozes the golden glow of summer's and autumn's bounty.

You get the point. In choosing what to grow, consider the kinds of fruits you and your household enjoy and the ways you like to pick and eat them. And this, of course, begs the question of how *much* to grow. Wait! Don't forget the earlier part of this section, when you looked inward and got some idea of the time and energy you're willing to invest in growing plants, which must take into account the kinds and amounts of plants you'll grow. With such limitations in mind, turn once again to the encyclopedia section, where you can see average yields for each kind of fruit.

Fruits worth waiting for. Some of these fruits can have you tapping your foot for a few years before they decide to yield up some bounty. My shipova tree, for example, took eight years before I could harvest its first fruits. The old Chinese proverb "The longest journey begins with the first step" offers no solace to some people; for them it would be better to plant such fruits as alpine strawberries, which bear the year they're planted, and red currant, which bears the following year.

Also be aware that even the easiest and most reliable of fruits in your area could experience an occasional crop failure. Imagine how irresistible those flavorful and usually colorful orbs are, just dangling from stems, to surrounding Nature in all her hungry guises. Can you handle occasional failure? Charles Dudley Warner wrote, in 1870 in *My Summer in a Garden,* that "[t]he principle value of the garden . . . is to teach . . . patience and philosophy, and the higher virtue—hope deferred, and expectations blighted, leading directly to resignation, and sometimes to alienation. The garden thus becomes a moral agent, a test of character, as it was in the beginning." Just think how virtuous failures can help you become! At least my occasional setbacks haven't deprived me of the pleasures of working outdoors with the warm sun on my back and the musical *snip, snip, snip* of my pruning shears in my ear; even failures let me experience kinship with the earth, with growing things, with the slow processes of nature.

Still, the goal is to avoid failure. Fortunately, a backyard is not a farm. You don't need to "move" a lot of one fruit at once, so you have the opportunity to plant a little of a lot of kinds of fruit. Not only does planting in small and diverse quantities keep failure at bay, but it also gives you a variety of fruits and fruit plants to enjoy. In more than three decades of growing fruits, I have been able to pick and eat a diversity of fruits every year despite some kinds of fruits occasionally succumbing to late frosts, some summers that remained cool and rainy, 17-year cicadas, winter temperatures that plummeted below –30°f, freak pests that reared their ugly heads, and other ills. Blueberries, by the way, have never let me down.

A Fruit for Every Landscape

Trees for specimen plants: apple, apricot, cornelian cherry, crab apple, hackberry, jujube, Juneberry, medlar, mulberry, nectarine, pawpaw, peach, pear, persimmon, plum, quince, raisin tree, Russian olive, shipova, sorbus, sweet cherry, tart cherry

Trees for an allée: apple, apricot, cornelian cherry, crab apple, hackberry, jujube, Juneberry, medlar, mulberry, nectarine, pawpaw, peach, pear, persimmon, plum, quince, raisin tree, Russian olive, shipova, sorbus, sweet cherry, tart cherry

Large trees: apple, crab apple, cornelian cherry, hackberry, mulberry, pear, persimmon (in warmer climates), raisin tree, shipova, sorbus, sweet cherry

Medium-sized trees: apple, apricot, cornelian cherry, crab apple, jujube, Juneberry, nectarine, pawpaw, peach, pear, persimmon (in colder climates), plum, Russian olive, sweet cherry

Small trees: dwarf apple, dwarf crab apple, dwarf mulberry, dwarf nectarine, dwarf peach, dwarf pear, dwarf shipova, medlar, quince, tart cherry

Shrubs for hedges: autumn olive, beach plum, clove currant, cornelian cherry, gumi, highbush blueberry, huckleberry, Juneberry, Nanking cherry, quince, rabbiteye blueberry, red (and white and pink) currant, rose, seaberry, thornless blackberry

Shrubs for mixed borders: autumn olive, beach plum, clove currant, gumi, highbush blueberry, huckleberry, Juneberry, Nanking cherry, quince, rabbiteye blueberry, red (white and pink) currant, rose, seaberry, thornless blackberry

Shrubs for specimen plants: autumn olive, beach plum, gumi, Juneberry, Nanking cherry, quince, rabbiteye blueberry, seaberry

Vines: grape, kiwifruit, maypop

Ground covers: alpine strawberry, lingonberry, lowbush blueberry, wintergreen

Plants with especially pretty flowers: alpine strawberry, apple, apricot, beach plum, blueberry, clove currant, cornelian cherry, crab apple, Juneberry, lingonberry, maypop, medlar, Nanking cherry, nectarine, peach, pear, plum, quince, rose, shipova, sorbus, sweet cherry, tart cherry, thornless blackberry

Plants that are especially fragrant: alpine strawberry, autumn olive, crab apple, gumi, maypop, plum, rose, Russian olive, wintergreen

Plants with good summer color: autumn olive, grape, gumi, jujube, kiwifruit, lingonberry, mulberry, pawpaw, persimmon, raisin tree, Russian olive, seaberry, shipova

Plants with good autumn color: blueberry, cornelian cherry, Juneberry, medlar, pawpaw, pear, persimmon

Plants with ornamental fruits: apple, autumn olive 'King Red', crab apple, cornelian cherry, gumi, lingonberry, medlar, Nanking cherry, persimmon, quince, red (and white and pink) currant, rose, Russian olive ('King Red'), seaberry, sorbus, wintergreen

Plants whose fruits ripen in early summer: alpine strawberry, gumi, Juneberry, mulberry, Nanking cherry, red (and pink and white) currant, sweet cherry, tart cherry

Plants whose fruits ripen in mid- to late summer: alpine strawberry, apricot, blueberry, clove currant, cornelian cherry, grape, gumi, huckleberry, kiwifruit (*A. kolomikta*), maypop, mulberry, nectarine, peach, plum, rose, thornless blackberry

Plants whose fruits ripen in autumn: alpine strawberry, apple, autumn olive, beach plum, crab apple, grape, hackberry, jujube, kiwifruit, lingonberry, medlar, pawpaw, pear, persimmon, quince, raisin tree, rose, seaberry, shipova, sorbus, wintergreen

Trees, shrubs, and vines with especially attractive bark: cornelian cherry, hackberry, Juneberry, kiwifruit, persimmon, Russian olive

Fruit plants especially suitable for containers: alpine strawberry, apple, blueberry, crab apple, lingonberry, medlar, nectarine, peach, quince, rose, tart cherry

All-around winners for long season of attractiveness and ease of care: blueberry, cornelian cherry, jujube, medlar, pawpaw, pear, persimmon, seaberry

Single plants of hardy kiwi can be trained to cover a trellis, but both a male and a female plant are needed to produce fruit.

Training an apple espalier is an artful way to produce luscious fruits in a small space.

Alpine strawberries create a tasty, low-maintenance ground cover.

GROWING THE PLANTS

LUSCIOUS LANDSCAPE FRUITS HAVE NO PARTICULAR GROWING REQUIREMENTS when grown where the weather suits them and where insect and disease pests pose no particular problems. Fulfill these requirements, and you can grow your fruits pretty much as you would any maple tree, lilac, or other strictly ornamental plant. To avoid any confusion about how best to go about growing trees, shrubs, and vines, what follows are the basics. We'll start with selecting and acquiring plants, then progress step by step through what's needed to get you to the point of enjoying the plant in the landscape and the fruit in your mouth. Every plant does have its special considerations, and with some fruiting plants, those relate to pruning, which is also discussed in this chapter.

Plant Selection

All your efforts to give the best possible care are for naught if you don't start out with the best possible plant. The best way to get such a plant is to purchase it from a reputable nursery. Select a plant whose top is no more than three times the size of the roots; whose roots look healthy, plump, and neither congested nor sparse; and whose stems are plump and without dark, sunken areas or rot, which could indicate disease.

Nursery plants come either potted, bare root, or, less commonly, balled and burlapped. My preference is for either of the first two because such plants can be more easily shipped (and thus are available in the widest selection), and because root damage is less likely to occur between the nursery and your yard. Balled-andburlapped plants are heavy, and any fracturing of the soil tears some roots. The size at which a plant can be taken out of the soil bare root and replanted successfully is limited, usually to about 5 feet in height, but that's a very reasonable size for planting. Watch out for potted plants that have spent so long in their containers that their roots grow in circles, something that then continues after the plant is put in the ground, resulting in self-strangulation. Slide a plant out of its pot and examine the roots, if possible.

Restrain yourself from always seeking out the largest possible plant in an effort to get the quickest landscape effect and harvest. Larger plants, if bare root or balled and burlapped, lose proportionally more roots in transplanting than do smaller plants, so they suffer greater shock and need more care—mostly watering—for a longer period. Even a large potted plant requires more time before enough roots explore the surrounding soil and make the plant self-sufficient. Recent research has demonstrated that because they suffer less transplant shock and establish more quickly, smaller specimens often overtake their initially larger counterparts after a few years.

Immediate Care for Mail-Order Plants

The greatest threat to mail-order plants' health and survival is their drying out. Any bare-root plant should begin its journey with moist packing material around its roots, any potted plant with one good watering before its departure. A quick and cool journey, then, is ideal.

I immediately unpack my mail-order plants upon their arrival to check that the material around their roots is moist. If not, I water the pot or, if the plant is bare root, unpack the roots and soak them in water for a few hours. If planting must be delayed, I pack the roots back in the material, moistened, in which they were shipped. Bare-root plants need to be kept cool to prevent their

leafing out before their roots are in the ground, so I store these plants near the cool, north wall of my home. Their roots can't tolerate temperatures much below freezing, so if temperatures threaten to drop below that mark, I move these plants to an unheated mudroom or garage. Another way to protect the roots of bare-root plants from excessive cold, yet keep the stems cool, is to dig a shallow hole in a shaded area (such as near the north wall of your home) and just temporarily plant the unpacked plant there. In any case, plant out the bare-root plant as soon as possible.

Growth of potted plants can similarly be held in check. If you want to get a start on the season, though, move them to a sunny area.

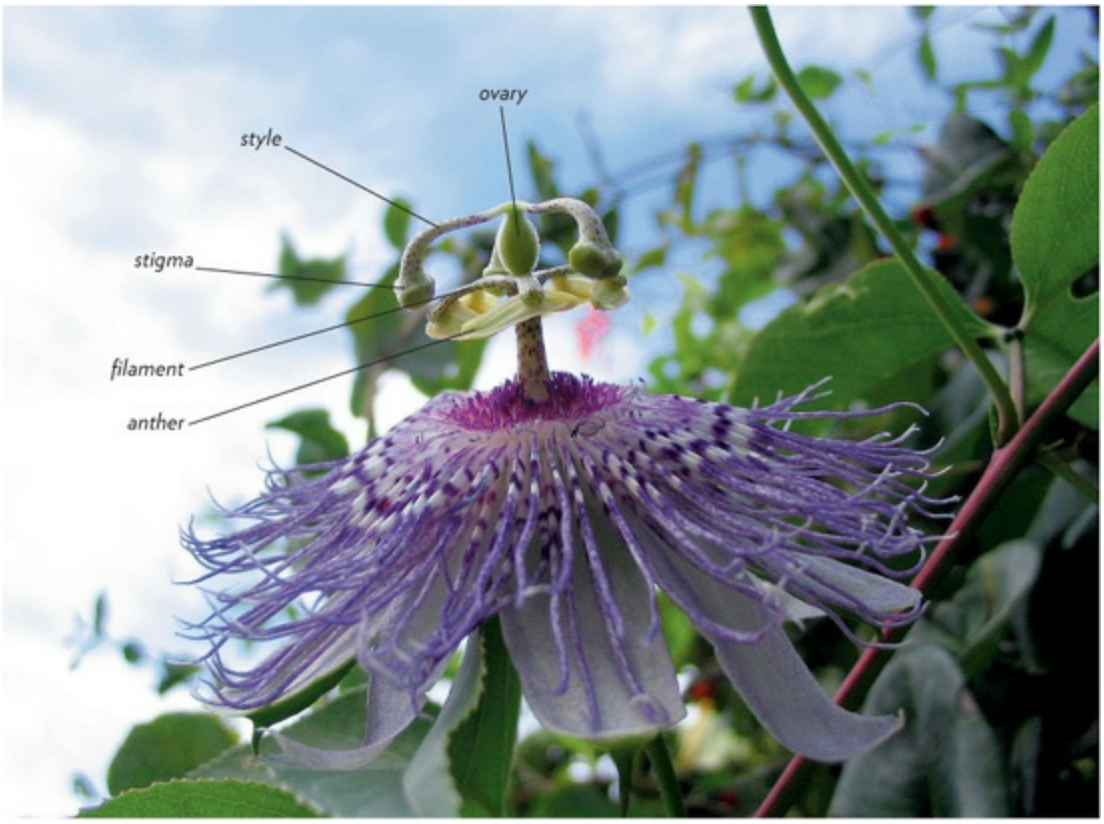
BECAUSE THEY SUFFER LESS TRANSPLANT SHOCK AND ESTABLISH MORE QUICKLY, INITIALLY SMALLER PLANTS OFTEN OVERTAKE THEIR INITIALLY LARGER COUNTERPARTS AFTER A FEW YEARS.

Pollination

Generally, a fruit develops when the female part of a flower is fertilized with pollen from the male part of a flower. That pollen might be transferred by insects, by wind, or mechanically, when the mere opening of the flower causes the parts to brush against each other. Flowers of many plants—including alpine strawberry and medlar—have both male and female parts, and these plants' flowers can fertilize themselves; that is, they are "self-pollinating" or "self-fertile."

Evolutionarily speaking, all that self-pollination can lead to the negative effects of inbreeding, so many other plants have evolved means whereby, although their flowers have both male and female parts, the pollen of a particular variety is incompatible with its female parts. Such plants, including apples and pawpaws, require "cross-pollination" between male flower parts of one variety and female flower parts of another. So although both 'Red Delicious' and 'Liberty' apple flowers each have male and female flower parts, neither tree can bear in isolation. But 'Red Delicious' flowers will swell into fruits if fertilized by 'Liberty' pollen, and the 'Liberty' flowers will swell into fruits if fertilized by 'Red Delicious' pollen.

All plants of the same variety of a fruit are clones—that is, they are genetically identical to each other and are propagated by such methods as grafting and cuttings. Each plant grown from a seed, however, is genetically unique, reflecting the particular jumbling around of chromosomes from its male and female parents. (You and your siblings, although from the same parents, are all genetic individuals because of that jumbling.) Some fruit plants exist only or largely as unnamed seedlings rather than as named varieties (maypops are an example). In this case, any two seedlings could provide cross-pollination for each other; a seedling could also, if need be, pollinate a named variety and *vice versa*.



Studying maypop flowers is a good way to learn about pollination—its reproductive parts are much more visible than those of other fruiting plants.

The need for cross-pollination is not an all-or-nothing proposition, and some fruits, such as blueberries and lingonberries, are partially self-fertile. Thus a 'Blueray' blueberry yields larger and more berries if grown near an 'Earliblue' blueberry, which in turn yields larger and more berries because of its 'Blueray' neighbor.

A couple of more wrinkles . . . not all plants have both male and female flowers. Wild persimmon trees, for example, have *either* male or female flowers. Here, cross-pollination of the female plant is from a nearby male plant, and only the female plant, of course, bears fruits. And not all plants remain stable with their gender. Female persimmon trees occasionally bear male flowers and vice versa. Sometimes persimmons even bear blossoms having both female and male flower parts!

And then there are fruits that develop from female flowers that don't require pollination at all. Some persimmons also show this characteristic.

The simplest way to go about ensuring that your fruit plant gets cross-pollinated, when needed, is just to put another appropriate plant in the ground. If that fruit's flowers have male and female parts, then you'll also have another variety to enjoy. If male and female flowers reside on separate plants, then . . . well . . . just enjoy the beauty of the male plant and the service it performs for the female.

Planting

Ahhh, with the smell of spring in the air, thoughts naturally turn to . . . planting. Spring isn't a bad time to plant; still, there are more-compelling arguments in favor of autumn planting. In spring, the soil is often too goopy for digging, but while you're waiting for it to dry out some, the plants are starting to sprout leaves. The soil is generally in better condition for digging in autumn and, although plant roots will grow as long as the soil temperature is above about 40°f, shoots have an innate mechanism that

prevents them from foolishly beginning growth until winter has passed. All this makes autumn planting an easier and more relaxed affair.

The actual planting of any tree, shrub, or vine need not be complicated or backbreaking. Still, simple and easy as it may be, planting must be done correctly to get a new plant off to an enthusiastic start. Before your shovel blade even touches the ground, though, think again to make sure you're giving the plant a suitable location in terms of your needs for beauty and flavor and the plant's needs for soil, light, and the absence of potential pests.

DIG IN

With plant in hand (or garden cart) and site and plant suitably matched, dig a hole. All that's needed is a hole that's two or three times as wide as the root-ball and just deep enough that, when set in its planting hole, the plant ends up at the same depth as it grew in the nursery or its pot. That depth is obvious from the change in appearance of the bark at the old soil line or from where trunks or stems flare out, which they did where they entered the soil. Dig the hole as a shallow pan, tapering it from ground level at its edges to full depth at its center, then slightly rough up the inside of the hole to facilitate soil penetration by new roots.

Before planting, gently loosen the rootball of the shrub to encourage new root growth.

After settling it in, gently tamp down around the plant to ensure that the roots are in direct

contact with the soil.

Borrowing Branches

If lack of space or the design for your yard precludes more than one plant of a fruit that needs cross-pollination, just bring some pollen over to your yard. Find a suitable pollenizer plant, clip off a few branches during bloom time, then leave the branches in a bucket near your plant; insects and the wind will do the rest, although you could help things along by shaking and brushing the itinerant blossoms near your planted fruit's flowers. Alternatively, graft a single stem of a suitable pollenizer onto your plant. Or, continuing the theme of "borrowed landscapes" mentioned in the design chapter, count on an existing tree in a neighbor's yard for pollination (or convince the neighbor to plant such a tree!).

UNPOT THE PLANT

If the plant is potted, slide it out of its container and into the hole, loosening up roots at the outer edge of the root-ball, then backfill with the soil you removed from the planting hole. If the plant is bare root, spread out the roots in the planting hole, then backfill with the soil you removed from the hole, sifting and pressing it with your fingers in among the roots as you fill. Bounce the plant slightly as you backfill to further work in soil among the roots.

If the plant is balled and burlapped, ease it carefully up to and then into the prepared planting hole. Try not to break the root-ball. Once the balled-and-burlapped plant is settled in, cut loose the strings binding the burlap and tuck one side of the burlap as close to the base of the roots as possible. Slightly rocking the plant—and a few more cuts to the burlap, if necessary—should enable you to remove the burlap with minimal disturbance to the root-ball. Once the plant is in place with its burlap shroud removed, backfill with soil.

MULCH AND WATER

You're not finished with planting once you've returned all the soil to the planting hole. Form a small ridge of soil around the edge of the hole to act as a dike to contain water. Then top the soil with a couple of inches of some organic mulch such as compost, leaves, or straw. The mulch will soften the impact of rain so water can readily seep in. Mulch also modulates soil temperatures and gradually decomposes to release nutrients and enrich the soil with humus. Mulch is especially important for autumn-planted trees, shrubs, and vines in order to retain summer's heat in the soil, thus promoting new root growth. Mulches also prevent wide swings in soil temperatures from heaving young plants, whose roots have yet to grab firmly on to the soil, up and out of the ground.

From here on, water is usually the single most important determinant of whether your new plant takes off or just sulks. For at least the first year—longer for plants more than about 4 feet high or in droughty seasons or regions—water regularly whenever rain fails. A rule of thumb is for the plant to receive the equivalent of about an inch of water once a week, although potted plants, especially larger ones, will need more-frequent watering until new roots begin foraging into surrounding soil. To translate that inch of water into gallons, apply about ¾ gallon of water for every estimated square-foot spread of roots. Because they lose fewer roots after leaving the nursery, smaller plants actually establish more quickly than do larger ones. The well-planted smaller plant, after its first year, should be well established, should have made a foot or more of new stem growth, and, except in arid

regions, is usually ready to survive without supplemental water.

STAKING

Trees 10 or more feet high and bushes with many stems, especially at windy sites, should be staked for a year until their roots take firm hold of the soil. One stake set in the ground on the side of prevailing winds suffices for trees with trunks less than 2 inches in diameter. Any tying material must be soft or padded. Don't coddle trees too much with staking, attempting to quell all movement or keeping stakes in place for years; some movement helps thicken and strengthen stems. Anchor the plant low enough, usually at about two-thirds of its height, to allow some movement.

Hold the Amendments

The backfill soil should be nothing more than what you removed from the planting hole. Many people erroneously want to add compost, fertilizer, or other materials to get all that "goodness" deep down near the roots. In fact, though, most feeder roots of all plants lie near the surface, and that's where the "goodness" does most good. Also, if the surrounding soil is unsuitable for the plant, making it suitable just within the confines of the planting hole will offer little benefit. Or worse: Roots then often decide to remain within the congenial environment of that planting hole, growing around and around within it, resulting in root congestion and self-strangulation. In addition, fertilizer mixed with soil in the planting hole is apt to burn new roots there.

The only exception to not messing around with the soil is when, say, soil pH (acidity) needs drastic adjustment or the soil is very low in phosphorus. Phosphorus is relatively immobile in the soil, so it works its way down very slowly when applied to the surface. Mix limestone, sulfur, or phosphorus, as needed, into the soil removed from the planting hole; beyond the planting hole, sprinkle what's needed on top of the soil and it will work its way down to be in place when roots eventually grow into the surrounding soil.

How to Grow Fruits in Pots

WEALTHY LANDOWNERS IN 19TH-CENTURY BRITAIN RAISED potted apples, pears, cherries, and plums in greenhouses in order to secure, as Thomas Rivers wrote in his book *The Orchard House, or the Cultivation of Fruit Trees in Pots Under Glass* (1860), "a certainty of a crop in every season." Few of us these days have the greenhouse and attendant staff to help with such an undertaking, but keeping a couple of plants is still manageable. I can bring alpine strawberries, fruiting in late winter in 4-inch pots on my sunny windowsill, to the dinner table with the same panache as Mr. Rivers's gardeners brought his potted peaches, ready for harvest, to his dinner table in April.

Special considerations are necessary when growing fruit plants in pots rather than in open ground. Although pretty much any plant can be grown in a container, dwarf and compact varieties are the obvious better choices where possible. Just about any container with sufficient volume and drainage holes to let excess water escape will suffice. And the container needn't be large: Just ask a 300-year-old bonsai pine in a small pot if a fruit tree, shrub, or vine could also be grown in a small pot. The main limitation of a small pot is that the smaller the pot, the greater the attention it demands for watering, feeding, and pruning the plant within, and you reap smaller harvests from the smaller plants

dictated by smaller pots.

For lovers of luscious tropical landscape plants like kumquats, there's always the option of growing in pots.

Fruit plants are not very different from other plants, so any standard potting mix will provide a good home for their roots. Traditional mixes are composed of equal parts garden soil for nutrients and bulk, organic matter (peat moss or leaf mold, for example) for better water retention, aggregate (vermiculite or perlite, for example) for draining away excess water quickly, and fertilizer. Most commercial mixes lack real soil and are composed of approximately equal parts organic matter, usually pine bark or peat moss, and perlite, along with nutrients. The potting mix that I make for all my potted plants, from tomato seedlings to 10-year-old kumquat trees, contains equal parts garden soil, compost, perlite, and peat moss along with, for every 5 gallons of mix, a nutrient boost of 2 cups of soybean meal and a light handful each of kelp powder, rock phosphate, and greensand. I add sulfur to the mix for plants that enjoy acidic soil.

Potted fruit plants cry out for more ongoing care than the same plants growing in the ground. (If that's a negative, on the plus side you get to enjoy greater intimacy with each plant.) The plants will need watering, perhaps every day or even more frequently, when the weather is warm and sunny and growth is well under way. I once had a collection of potted fruits that tethered me to the house like a dairy farmer to his milking barn until I set myself free with the help of timers and drip-irrigation tubes. Such a system is inexpensive and easy to set up—and well worth it, considering the freedom it offers.

The limited volume of any container soon fills with roots, so once a plant is in the largest container you want it to call home, you're going to have to cut back the roots every year or two to make room for new potting soil. The best time for this operation is in late winter, before new growth begins; the worst time is when a plant is actively growing. I slide my plant out of its pot, slice or saw off an inch or two of soil all around the root-ball, and tease some of the remaining roots out from what's left of the root-ball. If I see any lanky roots curving around the root-ball, I loosen them and then cut them back. I then stick the plant back into its pot and firmly pack fresh potting soil into the space created.

As with any other fruiting plant, the stems need pruning, except in this case more-severe pruning than the same plant growing in the ground would require. The additional pruning will balance the amount of stems with the new, lesser amount of roots. You'll also want to prune the stems to keep the plant from growing too large, which would look out of proportion to the pot and be more liable to blow over. The height of the stems should be no more than two or three times the height of the container.

Unless you live in the cool but never frigid winter climates of the West Coast, the Southeast, or western Europe, your potted fruits will need some sort of winter protection. Roots of even hardy plants evolved in soil where temperatures remain relatively moderate year-round. (Five feet deep in the soil, temperatures consistently hover near a balmy 50°**F**.) Yet temperatures within the relatively small volume of soil in a pot sitting exposed on top of the ground might plummet in winter to just about the same temperature as is the air. If you insist on enjoying the landscape effect from your potted trees and want to leave them out all winter, grow hardier kinds of fruits and use pots that are nonporous and large, and that tolerate freezing temperatures. This rules out terra-cotta.

If winter landscape effect is immaterial, other options exist for getting a plant through winter. I've protected the roots of my potted plants in winter by plunging the pots into fitted holes in the ground, then mulching; by clustering them and then piling wood chips or leaves up around the pots; or by moving them down to my very cool basement. A slightly heated or attached garage might also be suitable. Remember, these plants' stems do need to feel some cold or the buds on their stems won't awaken in spring. Light is unnecessary for deciduous plants in winter.

Most important is to hold back growth as much as possible for any sheltered plant until the weather warms enough to move it outdoors, which, if the plant is dormant, is when temperatures cease to drop much below freezing. Any early growth promoted in dim winter light will be sappy rather than robust, and such growth will burn if exposed too rapidly to outdoor conditions when the weather warms. Hold back growth through winter by keeping the plant cool, not fertilizing, and keeping the soil on the dry side. That is, unless you want to bring ripe apples to your dinner table in early summer, à la Thomas Rivers, in which case increase warmth, feeding, and watering carefully and gradually over the course of many weeks, and give the plant plenty of light.

Defense Against Pests

Throughout this book, I've emphasized selecting plants for resistance to insect and disease pests, or growing fruits where such pests are not significant. You may have noticed that I haven't mentioned larger pests—that is, those with fur or feathers. They also, depending on what you grow, what other creatures live nearby, and how hungry they are, may want to share in the bounty. Some amount of sharing is acceptable, but when the scale tips too far in one direction—theirs—action is required. This is especially true with young plants that can ill afford the loss of what few stems and leaves they

have.

Physical barriers are the most straightforward and usually the most effective line of defense. That barrier will usually be some sort of mesh: netting for birds, high fencing for deer, ¼-inch-mesh hardware cloth for mice, and a 3- to 4-foot-high fence for rabbits and woodchucks (groundhogs), with an electrical "assist" for raccoons. Deer can jump high or wide but not both, so stop them with two 4-foot-high fences spaced 5 or 6 feet apart or with a single 8- to 10-foot-high fence. Keep mice and rabbits at bay from individual plants with a 2-foot-high cylinder of ¼-inch hardware cloth pressed into the ground around a young plant. Single-stemmed trees and vines could, alternatively, be protected with trunk wraps of plastic or other materials. If you're running fence around a larger area, prevent mice, rabbits, woodchucks and other burrowing animals from working their way under the fence by burying it a foot deep or else bending a foot of the bottom portion toward the outside of the fenced area to lay on top of the ground. Animals attempt to burrow right at the fence and will be stopped by that "foot." For raccoons, that electrical "assist" need be nothing more than a single wire powered by an electrical fence charger insulated from and a few inches atop a metal mesh fence. Two strands of charged wire, one at 6 inches and the other at 12 inches from the ground, are also effective against raccoons as well as woodchucks.

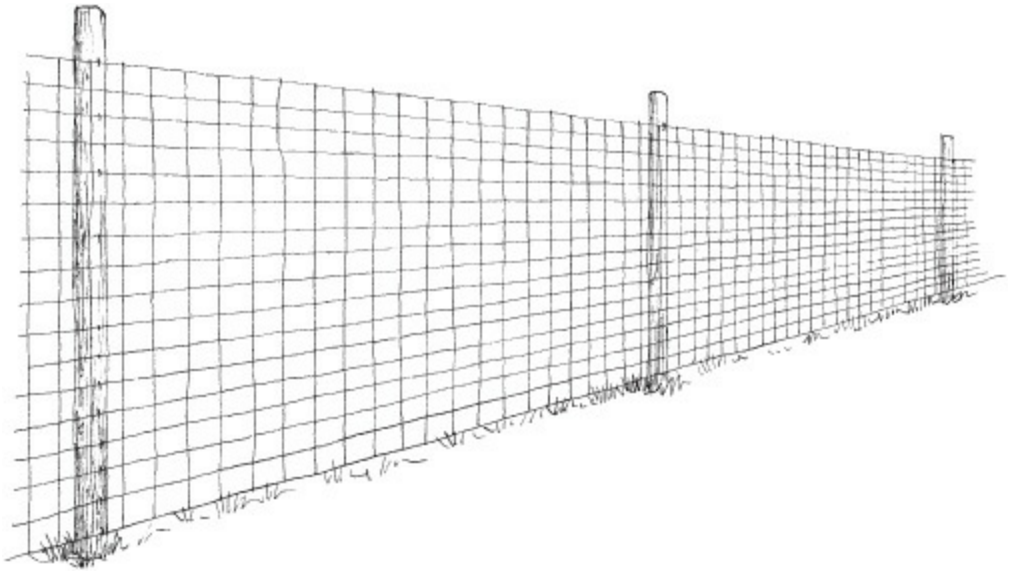
That's not the whole menagerie, and some variation on the barrier theme could be needed for other animals. Squirrels, for example, can be kept off isolated trees with smooth metal or plastic trunk guards or with large, upside-down funnels around the trunks.

Animal repellents are almost as effective as physical barriers if they're put in place before feeding begins and if you periodically vary them. Repellent sprays are not always an option for keeping pests off fruits because, after all, we have to be able to enjoy eating the fruits. Repellants can keep animals off bark and stems in winter and, depending on their longevity, off fruits early in the season. (Squirrels, for example, relish small green peaches only a few weeks old.) Repellents that you can hang in trees, with varying effectiveness depending on local conditions, might contain human hair, bobcat urine, deodorant soap, garlic, and/or essential oils. Electronic repellents, such as Scarecrow and Deerchaser, are activated via an infrared motion detector, then repel with a spray of water, sound, and/or light.

Depending on your sensibilities and skills, trapping or shooting may be options for dealing with certain creatures. Consult local regulations about what you can and cannot do.

My favorite, and the most low-tech, solutions to most animal problems are outdoor dogs and cats. Plus, you get pets in the bargain.

A cylinder of hardware cloth or small-gauge metal fencing will help protect fruit trees from gnawing rodents.



A vertical deer fence should be at least eight feet high.

Pruning

Most trees, shrubs, and vines benefit from being pruned at certain phases of their lives.

For the young tree, shrub, or vine, pruning is just one trick that promotes good form. Good form results in strong branches, which is especially important when those branches are eventually weighted down with fruit. Good form also sets the stage for permanent limbs that, even with age, bask in abundant light and air, important for high-quality fruit and for limiting pest problems. And the fruit on a plant with good form is kept conveniently within reach.

A mature tree, shrub, or vine—that is, one that is or nearly is full size and bearing fruit—may or may not need regular pruning, depending on the particular plant. Regular or occasional pruning serves to let in light and air where growth has become congested and stimulates new growth, where needed, on which to hang future flowers and fruits. Removing or shortening stems on the mature plant also removes potential fruits, directing the plant's energy so that those remaining fruits end up larger and more flavorful.

And then there's the old fruit tree, shrub, or vine that, if it's been cared for over the years, needs the same pruning as the mature plant. Even an old plant that has suffered neglect, though, can usually be returned to its former glory with rather drastic cuts—so-called renovative pruning—that stimulate vigorous, well-placed new shoots.

Water sprouts (above) are unproductive and create shade within an apple tree. They should be pruned away every year (below).

An old neglected shrub, vine, or tree might need more than just pruning to bring it back to its glory days. You may also have to fertilize, kill any weeds choking the plant, and control diseases that have gained the upper hand. Before you do anything, though, determine whether the decrepit plant is worth saving in the first place. Is the plant a good variety in terms of beauty, fruit flavor, and pest resistance? Take into account neglect in evaluating these qualities firsthand. And consider whether you really do want that plant, or any other plant, in that particular location in the first place.

PRUNE A YOUNG SHRUB LITTLE OR NOT AT ALL BEYOND THE USUAL REMOVAL OF ANY DEAD, DISEASED, OR BROKEN STEMS.

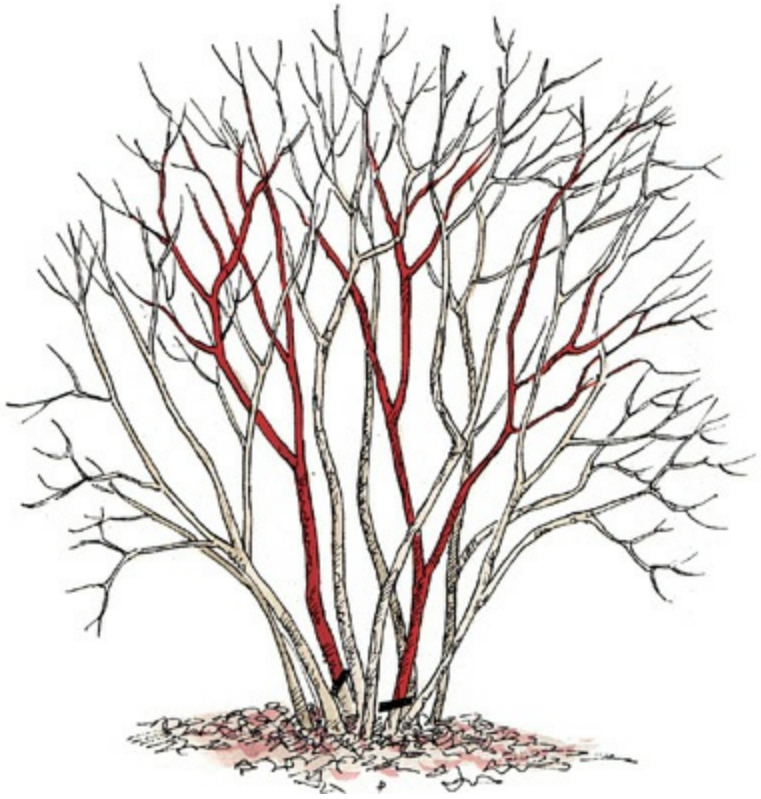
GENERAL ADVICE

Let's look at how to prune trees, shrubs, and vines at each stage of their lives. First, here are some generalities that apply to pruning any plant. Unless indicated otherwise, prune while the plant is dormant, preferably after winter's coldest weather has passed, and always remove any dead, diseased, or grossly misplaced branches. Use sharp pruning tools, because they cut more easily (good for you) and because they cut more cleanly (good for your plants, for better wound closure).

Two ways about it. Note that there are really only two ways that you can cut a stem, and plants respond differently to each. The *heading cut* entails shortening a stem, anything from merely pinching out the top inch of growth to cutting back a stem by two-thirds or more. When you make a heading cut, buds left on the remaining portion of the stem are awakened to grow into side branches, making this type of pruning cut useful where you want more branching. The other type of basic pruning cut is the *thinning cut*, which entails removing a stem completely, right to its origin. Thinning cuts are useful for opening up congested areas within a plant because no regrowth occurs near these cuts.

What follows are generalities for pruning trees, shrubs, and vines; look for specific needs, if any, for each kind of fruit plant under its heading in the encyclopedia section. Throughout this book, I've heralded the low-maintenance aspect of luscious landscape fruits. That's not the case, with respect to pruning, for espaliered fruit (mentioned in the design section). Espalier requires detailed, regular pruning. How much depends on the kind of fruit, a topic discussed in the last part of this pruning section.

A heading cut redirects growing energy to side branches and creates bushier growth.



A thinning cut helps open up congested areas within a plant.

YOUNG SHRUBS

Good form is not an issue with shrubs because their stems are not permanent. Old stems are always becoming decrepit, to be replaced by new stems that spring forth at or near ground level, all of which makes shrubs look, well, shrubby. What is important for any young shrub is to get it quickly established in its new home. To this end, prune a young shrub little or not at all beyond the usual removal of any dead, diseased, or broken stems.

However, if a new shrub has so many stems and so paltry a root system that wind will sail away the young, barely rooted plant, cut away some stems to let air pass through. Restrict such pruning to the removal of whole stems rather than the shortening of many stems, thus preserving many stem tips, which release a hormone that promotes root growth. Also prune if you expect the plant to suffer from thirst, though a better approach than this removal of potential energy-producing leaves is timely watering.

MATURE SHRUBS

Shrubs attain maturity quickly, although their stems are generally not long-lived, becoming decrepit and less productive after a few years or even one year. Keep a mature shrub in that mature, productive stage by what's called *renewal pruning*. Simply put, renewal pruning entails getting rid of old, decrepit stems and removing excess new stems so that each remaining new stem has sufficient light and space to develop well. The well-pruned mature shrub, then, always has a few new stems, a few middle-aged stems, and a few older (but not too old) stems. Each year the shrub is renewed as stems move up in age, with new young stems being added and the oldest stems being removed.

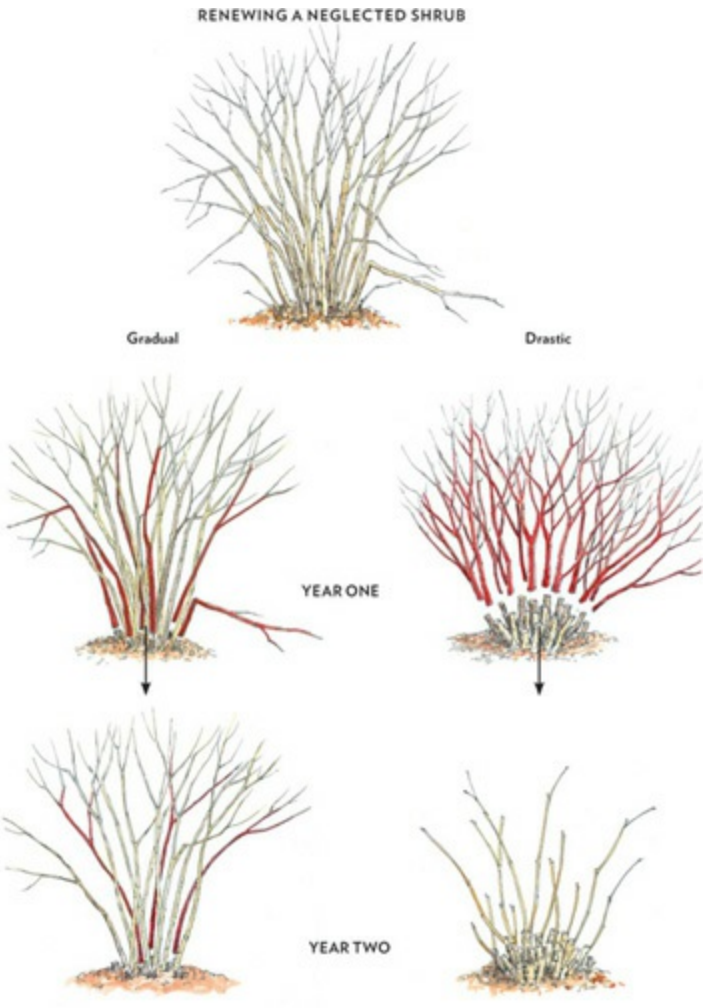
A WELL-PRUNED, MATURE SHRUB ALWAYS HAS A FEW NEW STEMS, A FEW MIDDLE-

AGED STEMS, AND A FEW OLDER (BUT NOT TOO OLD) STEMS.

The trick—and it's not much of a trick—in pruning a shrub is knowing at what age to remove an old stem and how many of the youngest ones to leave. Always save the most vigorous and healthiest of those youngest stems. Some shrubs call for a bit more pruning: removing excess twiggy growth higher up in the plant, shortening flower- and fruit-bearing stems, and pinching shoots to promote branching.

OLD, NEGLECTED SHRUBS

If you're willing to forgo flowers and fruits for a year, perhaps two, then renovating an old, neglected shrub is quick and easy. Lop all stems to within a few inches of the ground in late winter and watch an abundance of new shoots push forth in spring. Then treat the plant just like a newly planted shrub, albeit one that, with a large, established root system, is going to grow quite vigorously. Thin out some of those new shoots, typically to a half-dozen or so, to allow sufficient elbow room for each that remains.



There are two options for renewing a neglected shrub—either gradually, removing old stems over the course of two years, or drastically, cutting back all the stems to the ground.

With just a little more pruning finesse, you can revitalize this shrub over time with little sacrifice of fruit. One reason for that relatively small sacrifice is that old, neglected shrubs don't bear many flowers or fruits anyway. The technique is to prune four or more of the oldest stems to the ground or

down to vigorous low side shoots, doing this annually over the course of two or three years. Also thin out excess new shoots to the best half-dozen or so. After two or three years, the makeover will be complete and the shrub will comprise a few stems that are one year old, a few that are two years old, and so on up to the age at which the particular shrub bears its most and best flowers and fruits.

YOUNG VINES

Fruiting vines are usually grown with a single trunk (perhaps two), with the goal of directing a young vine's energy into this trunk-to-be. Merely cut away all but the strongest shoot (or two), then stake that shoot (or shoots) upright. Pinch back or cut away competing shoots.

Grape and kiwi, the only woody vines in this book, are usually trellised in one of two ways. (Maypop is an herbaceous perennial vine whose stems die to the ground each winter.) The first, *haphazard training,* involves nothing more than letting the vines clamber at will over their supporting arbor or trellis. The second, *cordon training,* is neater, and you end up with more and tastier fruit that is easier to get at.

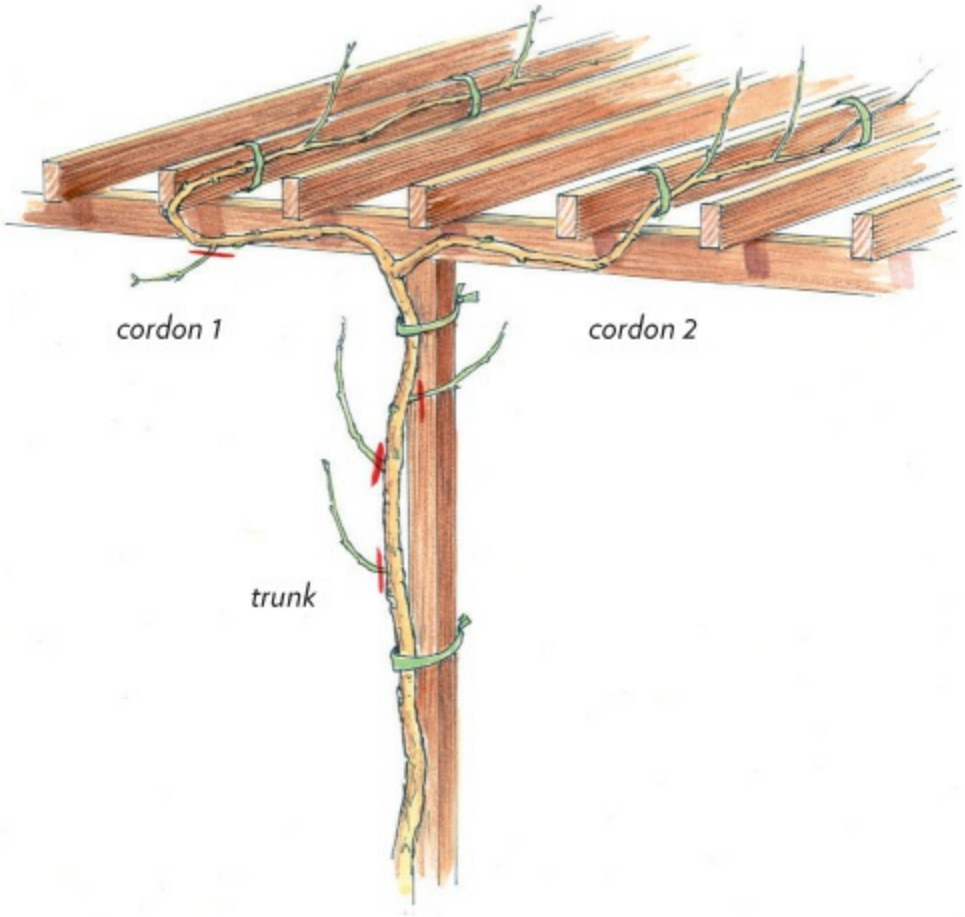
Our word *cordon* comes from the Latin *chorda*, meaning cord. For cordon training, continue that trunk, now a "cordon," up and across the top of the arbor. If the arbor is very large, take a side branch from the trunk near where it reaches the top of the arbor and run that side branch, now another cordon, over the arbor at some distance from the first cordon. Give each cordon sufficient space because temporary side branches will be growing out along the length of and perpendicularly from each cordon.

MATURE VINES

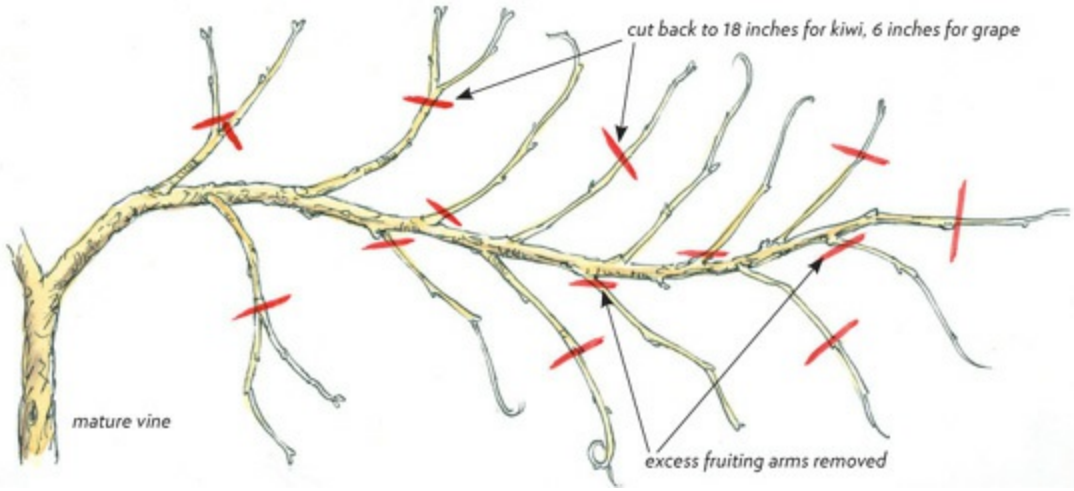
If you've ever gazed up at a grapevine climbing a tree at the edge of a forest, you can appreciate the need to prune cultivated vines so their fruit remains accessible year after year. Nothing special about keeping the mature, haphazard vine in tow—just hack it back as needed.

With a cordon-trained vine, the cordon is permanent but fruiting arms, which grow off at right angles to the cordon, are not. Grapes and kiwis bear fruit only off young stems (one year old), called canes, and each year you cut back all canes, *except* those few needed to bear the current year's fruit, almost to the cordon. Without that drastic cutting back, canes would, over time, originate farther and farther from the cordon. And why are excess canes cut back "almost to the cordon"? Doing so leaves some buds that will grow into well-placed new canes—that is, canes originating conveniently near the cordon rather than farther away.

Removing all those excess canes does more than keep fruit conveniently within reach. Canes bear fruit, so removing canes removes potential fruits, allowing the plant to channel its resources to those that remain. All parts of the plant are better able to bask in light and air, which contributes to the increased quality and quantity of fruit from cordon-grown vines as compared with haphazardly grown vines.



The permanent parts of a cordon-trained vine are the trunk and one or more horizontal cordons, off which grow fruiting arms.



On cordon-trained vines, all canes except those bearing the current year's fruit, should be cut back almost to the cordon.

OLD, NEGLECTED VINES

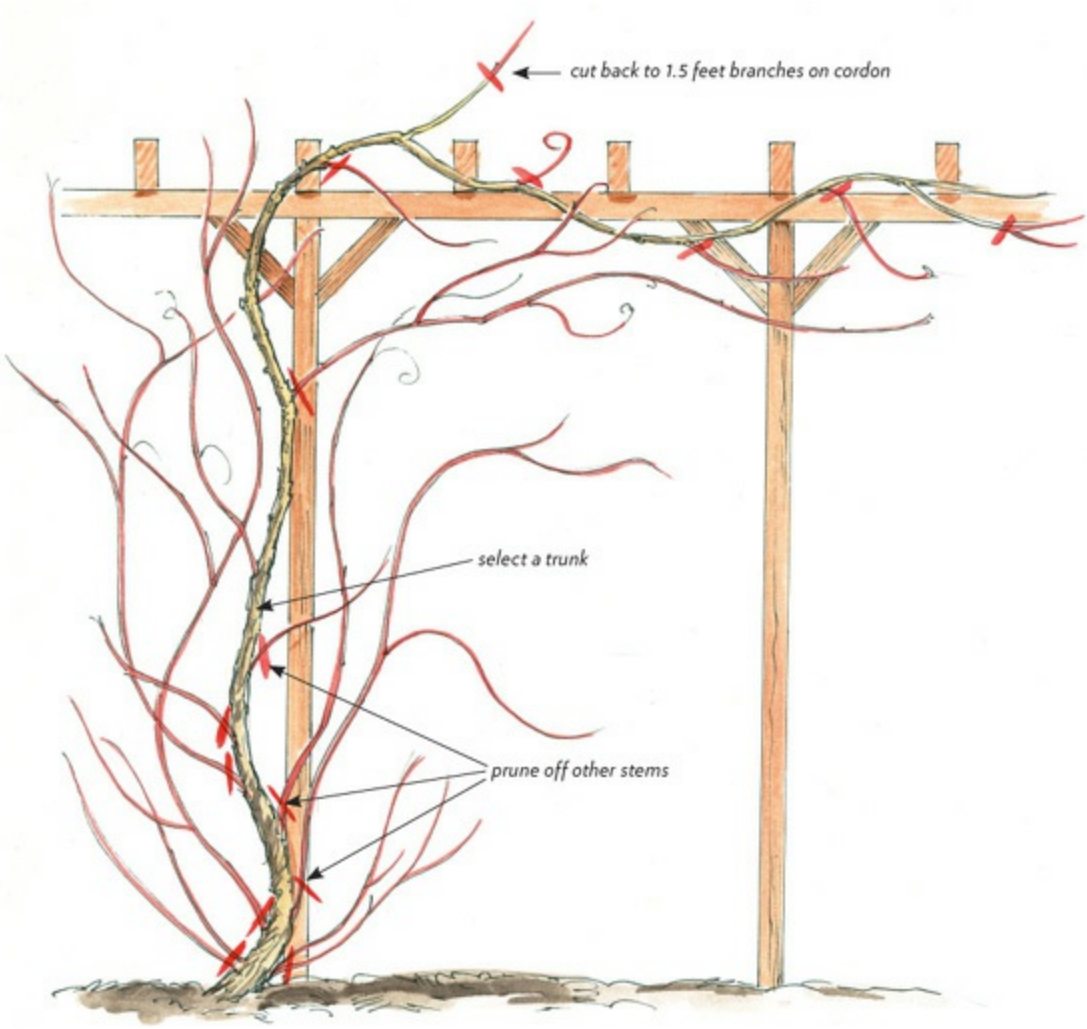
As with the neglected old shrub, the easiest and quickest way to renovate a decrepit vine is to lop the whole thing to ground level, then train subsequent growth just as you would a new, very energetic vine. Don't expect to harvest any fruit for at least a year.

Then there is the more time-consuming alternative that does not sacrifice harvest, even the first

year. Start by staring at the tangle of stems and selecting for a trunk a sturdy, well-placed one most eagerly growing to the top of the supporting pole of the arbor. Then prune off all other stems growing up from the base of the plant or branching from that selected trunk between ground level and the top of that supporting pole. Follow that trunk as it continues across the top of the arbor, where it's then called a cordon, and cut back to about 1½ feet any branches growing off it.

Depending on the size of your arbor, you can have more than one cordon running across its top. In this case, select two or more to spread out across the top of the arbor, all of them originating near where the trunk reached the top of its supporting pole. Once you've selected the cordons, prune back to 1½ feet any side branches.

Too many side branches are probably growing off your cordon or cordons. Cut back to within about an inch enough of those side branches that no two are less than a foot apart.



To renovate a neglected vine, begin by selecting one sturdy stem to serve as the "trunk" and pruning away all other stems. At the top of the arbor, cut back to 1½ feet any branches growing off it.

YOUNG TREES

Picture either a Christmas tree or an ice-cream cone when it comes to good form for a young tree. Which one? It depends on which shape you think looks prettier—that preference, of course, tempered by the natural inclinations of the particular kind of tree. Either shape can set the stage for strong limbs that bask in light and air.

Training a central leader. For the Christmas tree shape, technically referred to as *central-leader shape,* select a single, vigorous, upright shoot to be the trunk, which, as it continues upward, becomes what is known as the *central leader* of the plant. That central leader must remain the only dominant, upright growth throughout the tree's life. If two shoots are competing for that position, cut away or repeatedly pinch out the growing tip of the shoot you want to be subordinate to the central leader.

A particularly elegant way to slow growth of an overly exuberant shoot without the plant-weakening effect of pruning is merely to bend the shoot to a more horizontal position. (Conversely, the way to make any shoot grow vigorously is to stake it to grow more vertically.) Bending alters the natural hormones within the plant, also leading to more branching and fruitfulness of that shoot. Bend shoots by hanging weights on them or tying them down with string.

Side shoots, which will become the tree's main scaffold limbs, will grow off the central leader. These future scaffold limbs might arise naturally, or you can encourage them by shortening the central leader by about a quarter of its previous season's growth at planting and each winter, or by cutting a notch in the central leader just above any bud you'd like to awaken to grow into a shoot. Most people tend to allow side shoots to arise closer together than is healthy for a tree. Imagine each side shoot eventually fattening into a 4-inch-diameter limb and you'll appreciate that they need to arise 8 to 12 inches apart along the developing trunk, with the larger distances for eventually larger trees. To further avoid crowding and competition, save for scaffold limbs those new shoots that arise in a roughly spiral pattern as you move up the trunk. Shoots that are most firmly anchored to the central leader are those that come off at wide angles to the leader, so select such shoots, create them with wooden spreaders or with weights or temporary tie-down strings. Throughout this training period, keep an eye out for and quell growth of any shoot that threatens to overtake the central leader.

Training for an open center. Training a tree to the ice-cream-cone shape, technically referred to as *open-center shape,* starts out similarly to central-leader training. The difference is that once you have selected three well-positioned side branches, lop back what would have been the central leader to just above the highest of those three branches. The tree now has three branches radiating up and away from the short trunk as far from one another as they could be so that each is exposed to abundant light and air.

Let each of the open-center tree's three main branches grow side branches naturally, or encourage them by shortening each main branch by about a third of the previous season's growth. Cut away completely any side branches that grow near the bases, especially inward, of those three main branches, because they would create future congestion there.

There is actually one more common shape to which fruit trees are trained: the *modified central leader* (an ice-cream cone on top of a Christmas tree?). This shape is useful for limiting the height of a central-leader tree. To accomplish this, cut back the central leader to a scaffold limb when the tree approaches the desired eventual height, thus terminating its upward mobility. That or a nearby scaffold limb may at some time decide to become a continuation of the leader. If so, shorten that aspiring leader to another scaffold limb.

MATURE TREES

Flowering and fruiting trees vary in the degree of pruning they need to remain productive and healthy. Mostly, the amount of pruning depends on the age of the wood on which the plant bears its most and best fruits. Those trees that bear most and best on younger wood require the most severe pruning because shortening stems coaxes new growth—for next year's fruits—from buds left along those

stems. On the other hand, apples, pears, and other trees bearing flowers and fruits on spurs (short, stubby growths) or other older stems need much less pruning. Only after many years do those old spurs grow crowded and nonproductive, and thus need replacement with younger ones.

Over time, unpruned mature trees tend to grow taller and to shade themselves, creating dank, disease-prone regions within the canopy of branches, regions that are too dark to support fruit or even leaves. In this case, thinning cuts are needed because these kinds of pruning cuts typically do not elicit regrowth near the cuts. Portions of the tree are thus opened up to light and air without causing further problems.

Young trees can either be trained to have a central leader (left) or an open center (right). Either shape can create a good foundation for strong limbs.

All this pruning does remove a certain number of stems that would have borne flowers and, hence, fruits. Incidental removal of these potential flowers is a good thing, though, because it directs a tree's finite resources into bringing the fewer remaining fruits to nearer perfection.

OLD, NEGLECTED TREES

For all their rustic charm, old, neglected fruit trees typically bear fruits that are too small, too high, and too insipid. The goal in pruning these kinds of trees is to lower the canopy, let in more air and light, and decrease the total number of fruits.

Begin by making some large cuts low within the canopy of limbs, pruning back one or two major limbs to their origins or to sturdy side branches. If more major limbs need cutting back, wait a year, and if still more must go, hold off cutting these for yet another year. Cut too much in one year and once shaded bark may get sunburned. New sprouts will undoubtedly appear near your pruning cuts. Choose well-placed ones to become permanent new limbs and cut away all others. With major cuts out of the way for now, progress to more detailed pruning. In addition to pruning back diseased, dead, or broken branches to sound wood, thin out stems where they crowd, and shorten some weak, drooping

stems.

When you've finished, your cleaned-up old tree might look even more charming than it did when it was neglected and overgrown.

ESPALIER

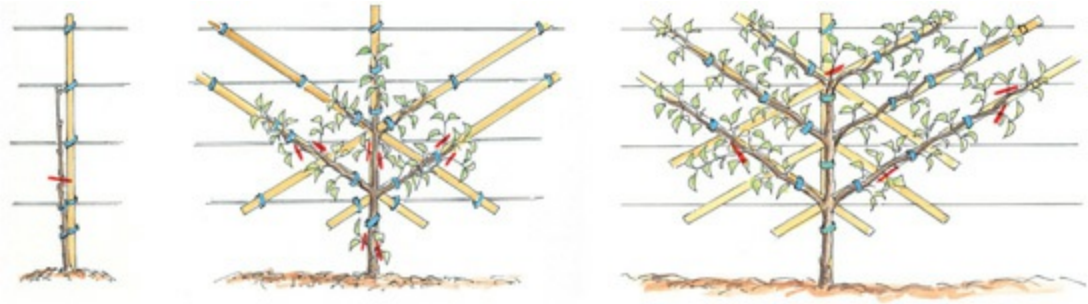
Espalier is not a low-maintenance way to grow fruits. Stems require careful training in the early years and after that, the plants must be looked over and repeatedly pruned at various times of year. The cuts, at least, are small and all parts of the plants can usually be reached with your feet on *terra firma*.

Any espalier consists of main stems, called leaders, from which grow branches and, in some cases, ribs. Branches are temporary, and the trick in growing an espalier is to minimize branch growth, so as to maintain the leaders as bold design elements even when they are clothed in leaves and flowers or fruits.

A single cordon. The simplest form for an espalier is a single stem, also called a cordon, which may be trained as a single vertical pole or horizontally to border a path or as a living edge to a garden. Cordons are best suited to plants that bear fruit on spurs—stubby, long-lived stems that elongate only a fraction of an inch per year—so that the cordon always looks like a cordon, rather than, periodically, a porcupine. Among common fruits, apples and pears and, to a lesser extent, plums make good cordons.

Multiple cordons. Now suppose you were to terminate that single stem of a vertical cordon near ground level and split it into two leaders, which turn away from each other before growing vertically again. You now have a *U palmette*. Split those two vertical leaders of the U again and you have a *double-U palmette*, increasing the spread and yield from a single plant—and also changing the design, of course. One variation on this theme has those two side branches of that central stem growing out into a wide U, then continuing upward before each bifurcates into a narrower U, and so on, with increasing height. Another variation: The central stem could grow up to the top of the plant, along the way sending out tiers of horizontal leaders growing off to the left and to the right. This form is sometimes called a *horizontal palmette* or, if the side arms angle upward, an *oblique palmette*. And for yet another variation: the central stem could split into a broad U with horizontal tiers of leaders growing outwardly from each upright of the U.

All plants tend to grow with greatest vigor from their uppermost buds, disrupting these espalier forms, so other shapes of espalier have been devised to overcome this hazard.



The Belgian fence is one of many espalier forms; as with any espalier, it's created by selecting and training a few branches to a specific pattern, then shortening other shoots in winter and periodically through the summer.

(Conversely, branches that are more horizontally inclined are weaker-growing and, incidentally, are

more fruitful and grow more but shorter side shoots.) In the "fan," the central stem terminates low in the plant, dividing into two leaders that angle upward and outward. Off each of these leaders, above and below, grow permanent ribs, with fruiting spurs or temporary fruiting branches growing from them. In other designs, the central leader might be purposely weakened by being bent around in a decorative curve, rather than allowed to grow straight upward.

Some espaliers are designed to interact physically and visually with neighboring espaliers. Among the most popular of such designs is the Belgian fence, a living latticework of branches. Adjacent branches of any espalier can actually graft together so that the espalier eventually becomes self-supporting.

Pruning to train. Training an espalier is just like training any other plant. Shortening a stem (a heading cut) stimulates branches to sprout from remaining buds lower down along the stem. Total removal of a stem (a thinning cut) gets rid of unwanted growth without inducing new stem growth.

No matter what the design, allow about 12 inches between leaders. Wherever one leader is to divide into a Y or a U, the two continuing leaders should ideally originate as nearly as possible opposite and near each other along the stem. A plant might already have some suitably positioned shoots, or they can be induced with heading cuts just above where bifurcations are wanted.

As a young espalier develops, shorten its leader or leaders each winter. Reducing a leader's length by about a quarter of the previous year's growth—even more on weak shoots in order to channel energy into fewer buds—keeps buds along the stem active. When a leader reaches full length, cut it back annually to within an inch or so of the previous season's growth.

Your thumbnail is a useful "tool" during training. Pinching can hold back a shoot trying to outgrow others. Pinching back the tips of developing leaders every foot or so also keeps buds lower on the shoot active, avoiding "blind" wood and reducing or even eliminating the need for dormant heading of the leader(s).

Tie the developing leaders of your espalier to bamboo canes, which in turn are tied to the wooden or wire framework that supports the plant. By tying a leader to a bamboo cane rather than directly to the framework, you can keep the shoot ramrod straight as you fix the cane to which it is lashed at any desired angle to regulate its vigor. For example, if an espalier is to have two horizontal arms, initially hold these arms at an upward angle to keep growth moving along—the more upward pointing, the faster the growth. As the arms approach full length, gradually lower the canes to slow growth and increase the development of side branches and fruit buds. All that needs to be done is to untie the cane, and then, with the branch still firmly lashed to it, retie it at the desired angle.

Maintain the older parts of an espalier even as the younger parts are in training. On those older parts, branch growth must be controlled so that the tracery of the leaders remains neat and prominent without sacrificing numbers or quality of flowers or fruits. Just how to do this depends on the particular plant's growth habit. Peach trees, for example, fruit only on one-year-old wood, so an ample supply of young branches is needed for the following year's flowers and fruits. Apple trees, in contrast, flower and fruit on long-lived, stubby growths called spurs, and so need little such invigoration.

No matter what the plant, pinch back or cut away any shoots growing perpendicular to the plane of an espalier. Also cut away overcrowded branches. And if everything works well and your fruiting espalier is thoroughly clothed in flowers, you may also have to thin out excess fruits.

For an especially easy and satisfying espalier, try red currant; pruning a red currant espalier is

detailed under that fruit's heading in the encyclopedia section.

This red currant is trained as a decorative T espalier around a vegetable garden.

Soil Care

Most people give little thought or effort to care of the soil beneath their rhododendrons, Japanese maples, and other ornamental plants; luscious landscape fruits will generally survive similar neglect. All categories of plants will, of course, thrive better if some attention is paid to the soil in which they grow. That care needn't be complicated or grueling.

Organic mulch. The most, perhaps all, that's needed for any of these plants can be summed up in two words: *organic mulch*. As any organic plant materials ("organic" denoting living or once-living) laid on top of the ground decompose, they release nutrients to nourish plants and enrich the soil with humus, the latter with far-reaching benefits on plants' nutrition and health. And even before these organic materials decompose, their physical presence on top of the ground moderates soil temperatures, softens the impact of raindrops so rainfall more easily percolates into the ground, then slows water's subsequent evaporation from the surface. All this presumes that the drainage of the soil, which you assessed at the site before planting, is suitable (see Soil and Sun, page 38).

So spread autumn leaves, wood chips, wood shavings, compost, pine needles, straw, hay, and any other organic materials beneath your plants 2 to 4 inches deep. If each autumn you normally rake fallen leaves away from your trees and shrubs to bag up or pile in an out-of-the-way corner, you now have one less task to do. If you have to procure mulching materials, choose them on the basis of availability, cost, and the desired appearance in terms of color and texture. Don't worry if you see mushrooms or other organisms growing in your mulch; organisms that feed on old, dead plant materials are unlikely to attack living plants, let alone the particular species beneath which you've spread the mulch. And ignore the oft-repeated myth that spreading such materials will rob plants of nitrogen (supposedly because the microorganisms that decompose these materials need nitrogen and get it from soil more efficiently than do plants). That's a concern only when these materials are mixed into the soil, not when they're just laid atop the soil, where decomposition takes place very slowly at the soil-mulch interface.

With a few exceptions, most plants thrive in soil that has a near-neutral pH. Seaberry is especially adaptive, and is able to survive in a pH range of 5.5 to 8.5.

Don't pile any mulches high against or even right up to tree trunks or stems of shrubs and vines. There, they create dank conditions that encourage rot. Also, mice enjoy living beneath mulch. Mice also like gnawing on bark, so mulches piled against trunks or stems give the rodents both food and lodging. Keep mulches a few inches away from the bases of plants, and protect trunks of trees, especially young trees, with a cylinder of ¼-inch-mesh hardware cloth, bark wraps, or other commercial protectors.

Plant roots spread two, even three times the width spread of branches, so the ideal is to spread mulch beneath plants to this width. Constraints of time, design, or mulching materials might keep you from spreading this much, but even the familiar ring of mulch frequently seen around plants growing in lawn at least helps in preventing "lawn-mower-itis" by keeping lawn mowers and weed whackers at bay.

Proper pH. Another important part of soil care is simply keeping an eye on your plants. If you notice poor growth and can't pin it on some disease or insect or the weather, the soil acidity might need tweaking or fertilizer might be needed beyond what's supplied by the decomposing mulch.

Even if you checked and adjusted your soil acidity to the correct level before planting, over time that acidity will shift to that of the native soil. Besides eyeballing your plants, check the acidity, which is a simple test, every few years. All that's needed, if adjustment is required, is to sprinkle some ground limestone (to decrease acidity) or pelletized sulfur (to increase acidity) on top of the ground at least as far as the spread of the branches. Many Cooperative Extension offices do the test and recommend amounts of limestone or sulfur to add, or can steer you in the right direction for

getting this information. Do check the acidity before considering fertilization, because plants cannot utilize nutrients, even if they are present in the soil, if the acidity is not in a suitable range.

Plant Detective: How to Tell Which Nutrient Is Missing

Hungry plants can't squeal like hungry pigs, but they can tell you they are hungry in other ways. Poor growth is one obvious indicator.

Plants can even be specific as to what particular nutrients they hunger for. For instance, nitrogen deficiency results in yellowing, then dropping, of oldest leaves. Potassium is another major plant nutrient, and plants show that they are hungry for this nutrient by a drying out of oldest leaves that begins along their margins. Phosphorus deficiency results in the oldest leaves taking on a reddish or purplish cast. Iron deficiency is not uncommon, usually reflecting soil acidity that is out of whack rather than lack of iron in the soil, and in this case the youngest leaves turn yellow, their veins remaining green. Plants require a dozen or so essential nutrients and each shows characteristic growth and leaf symptoms when sufficiently scant.

But don't reach for a bag of fertilizer as soon as you see an off-color leaf. Bronzing of leaves, for instance, could be due to spider mites rather than hunger; mottling of leaves could be caused by viruses; and dry soil makes leaves die in a way that looks a lot like potassium deficiency.

A soil test is a reliable way to confirm a deficiency, and a test every few years can check nutrient levels so that they never drop to the point where plants have to be "screaming" for food. A soil test also checks soil acidity, important because it determines whether or not a plant is able to utilize nutrients in the soil.

Organic fertilizer. Plants need more than a dozen nutrients for health, yet the nutrient most likely needed is some form of nitrogen (not because of the mulch, but just because this is the nutrient plants need in the greatest amount). I prefer simple, inexpensive, and straightforward approaches to plant nutrition, so I apply nitrogen in the form of soybean meal, which is available at feed stores and used primarily for feeding chickens and hogs. Warmth and moisture stimulate soil microorganisms to decompose soybean meal and release its nitrogen in a form that plants can utilize. That same moisture and warmth also stimulates plant growth, so the nitrogen is conveniently and naturally released in synch with plant needs. I apply soybean meal, when appropriate, by sprinkling it on top of the ground at the rate of 1 to 2 pounds per 100 square feet, preferably sometime from late autumn to early spring so that it's in place and ready to act in spring. One feeding of this organic nitrogen fertilizer suffices for the whole season.

Although nitrogen is the nutrient most likely to be limiting, a deficiency of some other nutrient could instead be a problem (this is unlikely, however, when organic mulches, especially a variety of organic mulches and most especially compost, are maintained). Periodically, or if indicated by poor growth or anomalous leaf color, perform a soil test for nutrients. Again, this test can usually be arranged through your local Cooperative Extension office, or it will direct you to a laboratory that performs such testing. Carefully follow instructions for actual soil sampling because the gathering of the sample itself is the major factor in the accuracy of the test. Test results will be accompanied by fertilizer recommendations.

Tests notwithstanding, do keep your eye on your plants. As they say, "The best fertilizer is the

gardener’s shadow.”

HOME LANDSCAPE PLANS

IN THE PAGES THAT FOLLOW, LANDSCAPE DESIGNER JILL WEISSMAN HAS SHARED some of her favorite plans that utilize fruit-bearing plants. For each plan, she's created outdoor living spaces that combine edible selections with ornamental landscape plants for year-round color and form, in addition to great taste. Although the plant selections for each scene are catered to specific climates, the plans themselves are appropriate for any region.

Think of this section as designer inspiration for your own backyard, a jumping-off point for your creative process. After reading over these plans, use the table on page 75, the list on page 41, and the Guide to Fruiting Landscape Plants starting on page 72 to find selections that will be suitable for your specific region, and have fun designing your very own edible yard!

A Patio Fruitscape

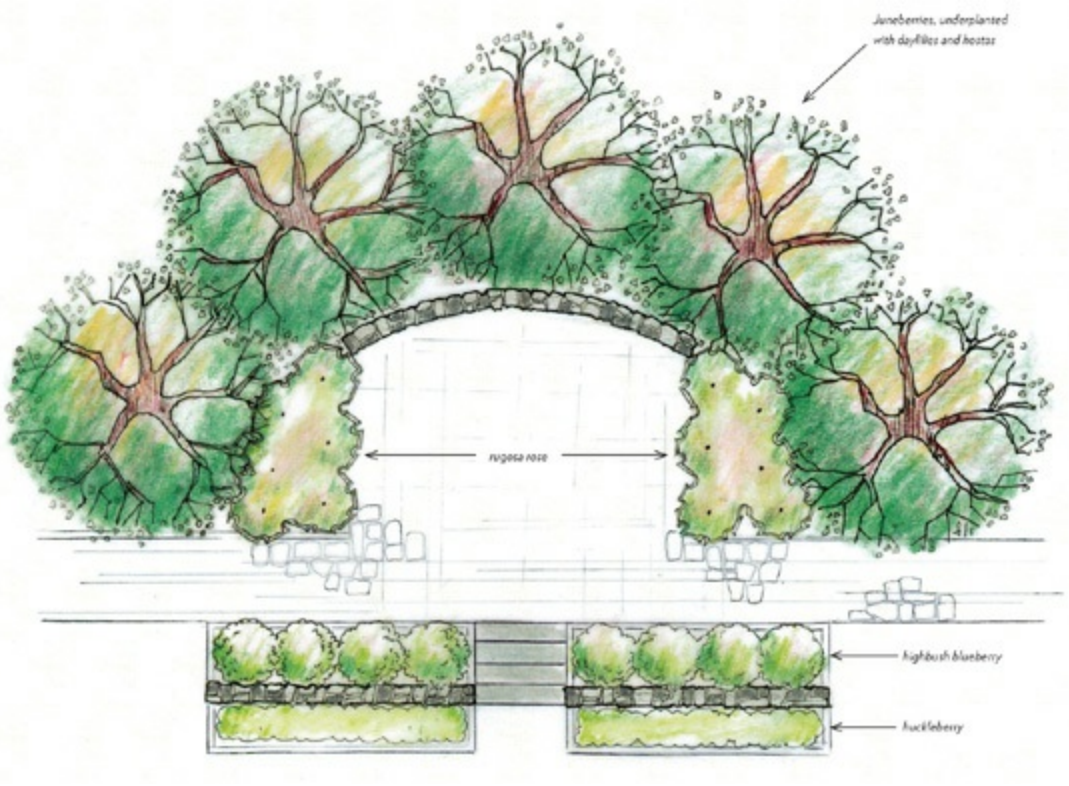
This patio area uses materials that evoke the New England aesthetic and plants that have multi-seasonal and sensory interest and are relatively low-maintenance. The blueberry and huckleberry plants enjoy well-drained areas that are high in organic matter, whereas the other plants do not necessarily require this. I have also set the blueberries apart so that they can be netted (to deter birds) during fruiting. The daylilies and hostas are intended as a colorful ground cover for the summer months. Also, Juneberries have quite an airy and open habit that permit a ground cover to flourish.

EDIBLES

'Autumn Brilliance' Juneberry (*Amelanchier* 'Autumn Brilliance')
Rugosa rose (*Rosa rugosa*)
'Berkeley' highbush blueberry (*Vaccinium corymbosum* 'Berkeley')
Huckleberry (*Gaylussacia baccata*)

ORNAMENTALS

Daylilies (*Hemerocallis* sp.)
Hostas (*Hosta* sp.)



Outdoor Living and Snacking Area

This large patio area has a simple, but very fruitful, planting palette. It offers plenty of respite from summer heat, with a graceful wood pergola and the soothing sounds of a water feature. Green walls of espaliered apples on both sides of the patio serve as privacy screens, and grape vines trained along five-foot-tall cables at the end of the pergola offer visitors a light snack within easy reach. Although not fruit-bearing, 'Goldflame' spireas anchor the setting with all-season color.

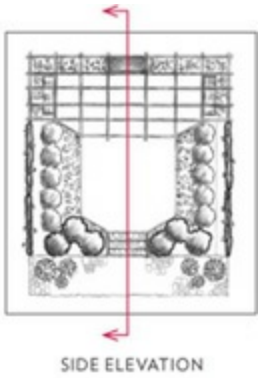
In late spring, clove currants send their spicy fragrance across the patio, followed by tart, black fruits in summer. Alpine strawberries, rarely seen planted en masse in the suburban yard, are showcased here as an edible ground cover. The entry to the patio offers an opportunity to display a potted collection of less-hardy fruiting plants like citrus and pomegranates, which would be taken indoors for the winter.

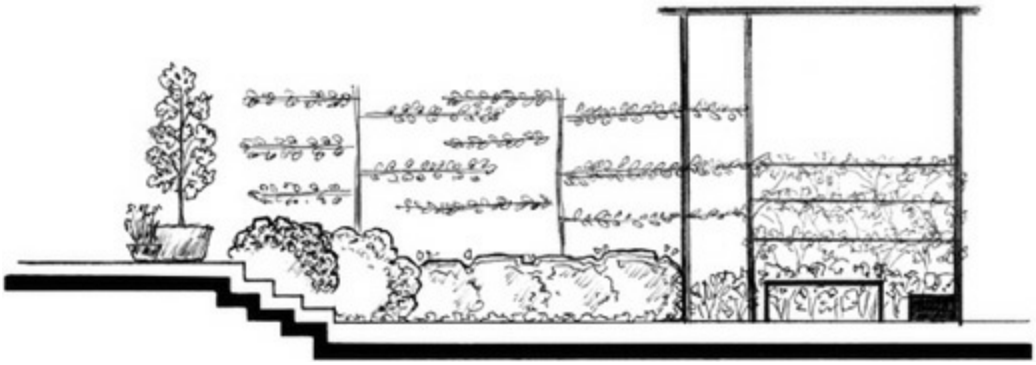
EDIBLES

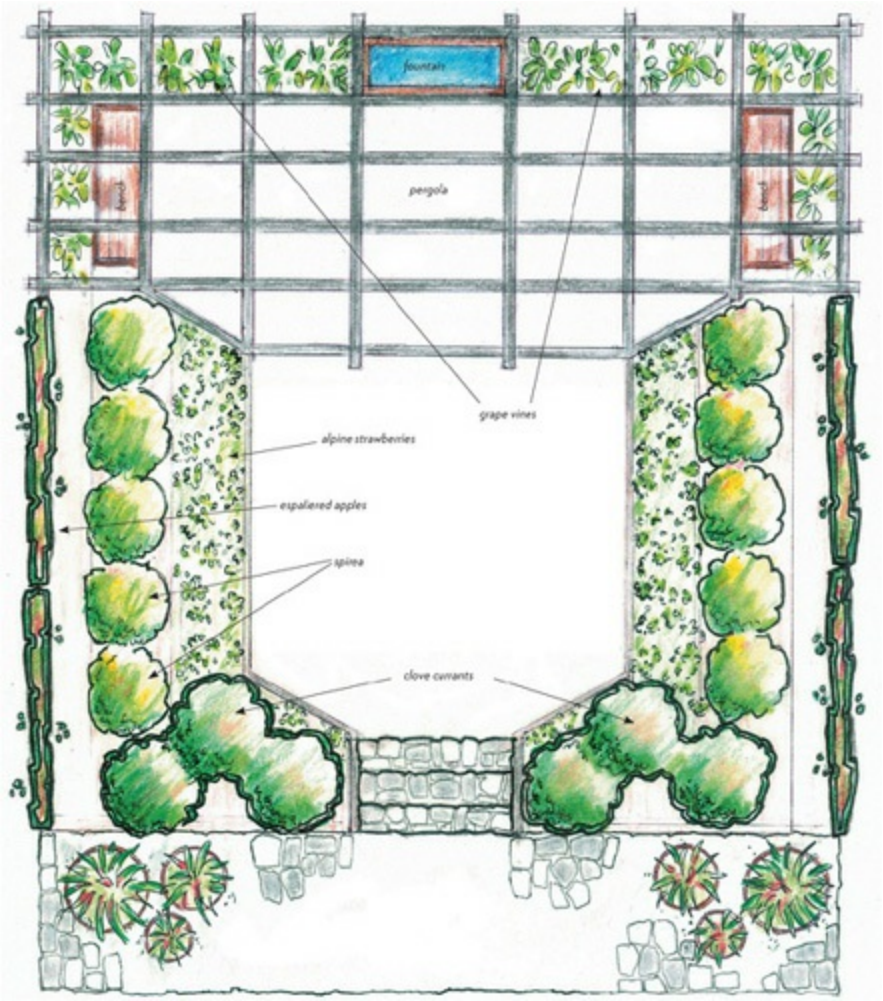
Espaliered apples (*Malus* sp.)
Grape vines (*Vitis* sp.)
Clove currants (*Ribes odoratum*)
Alpine strawberries (*Fragaria vesca*)

ORNAMENTALS

'Goldflame' spirea (*Spiraea* 'Goldflame')







A Modular Backyard

This design presents a suburban backyard with plant selections for a mild-winter climate (Zone 8). The three main areas—the open lawn/children's play area, pool area, and the vegetable garden—

were arranged for easy access and visibility from the house. In addition, the pool area is separated from the other areas for safety and privacy.

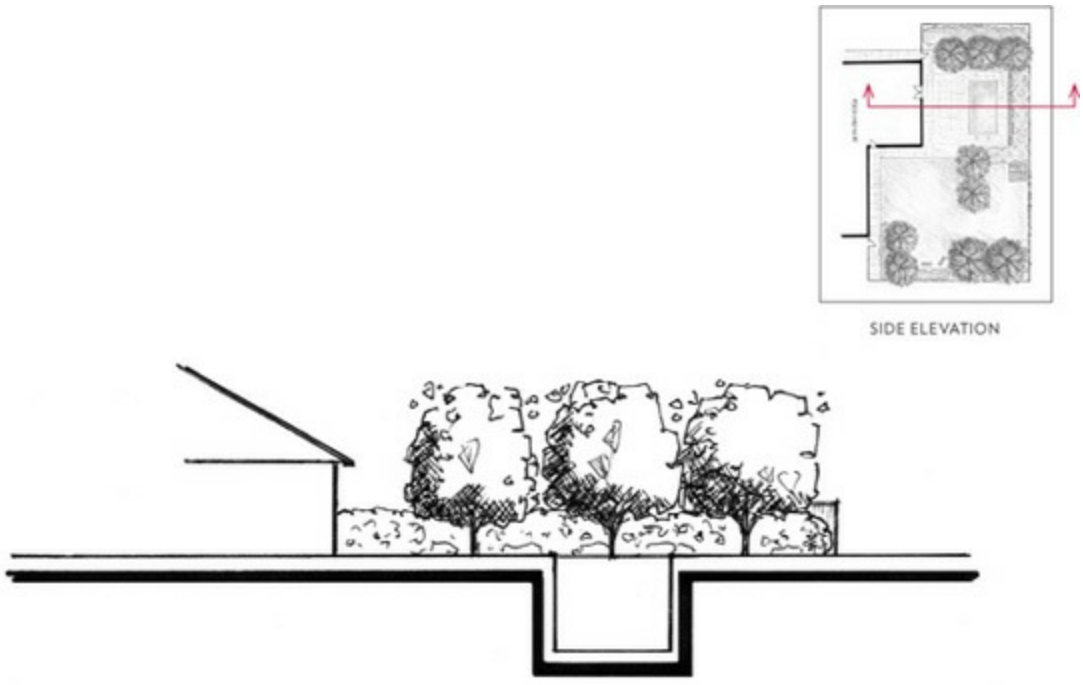
The plantings delineate the boundaries of each area in a "modular" fashion, with beds that contain groupings of three small to midsize trees, with fruiting shrubs and/or herbaceous perennials forming an understory. This modular form is easy to repeat throughout the landscape to define/redefine other spaces. The mixed woody/herbaceous planting provides a range of heights, textures and colors and fruits—an attractive multi-season appeal.

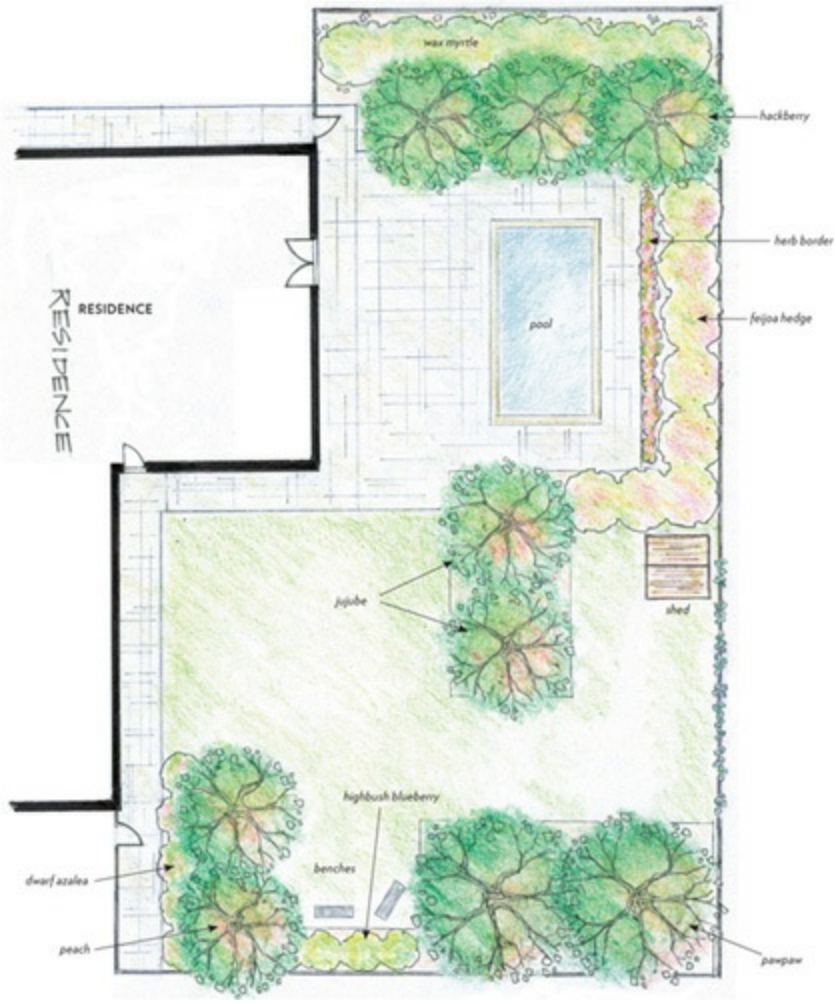
EDIBLES

'Chicagoland' hackberry (*Celtis occidentalis* 'Chicagoland')
Feijoa (*Acca sellowiana*)
Pawpaw (*Asimina triloba*)
'Emerald' and 'Sharpblue' highbush blueberry (*Vaccinium corymbosum* 'Emerald' and 'Sharpblue')
Jujube (*Ziziphus jujuba* 'Ming Tsao' and 'Lang')
'Tropic Snow' peach (*Prunus persica* 'Tropic Snow')
Wax myrtle (*Myrica cerifera*)

ORNAMENTALS

Dwarf azalea (*Rhododendron* 'Coral Bells')





An Edible Foundation

This front-entry walkway is a dynamic shape that not only guides the visitor to the front entrance, but also orients them to other views of the property and offers small gathering areas in which to greet visitors. In this way, the entry walk serves its conventional purpose—to lead people from the driveway to the front door—but also spurs a dialogue between the architecture and landscape, visitors and their destination.

The foundation planting reinforces the movement of the walkway, and presents large swaths of edible ornamentals. These ornamentals boast beautiful flowers and fragrances, and many produce edible fruits, as well. Two trees that are not often seen in the residential landscape are featured: the wonderfully curious medlar anchors one wing of the planting, while a cornelian cherry provides an early-spring burst of color at another. Craggy, three- to four-foot-tall boulders serve as focal points along the walkway, adding visual interest to the path.

EDIBLES

Medlar (*Mespilus germanica*)
Rugosa rose (*Rosa rugosa*)
Lowbush blueberry (*Vaccinium angustifolium*)
Nanking cherry (*Prunus tomentosa*)
Clove currant (*Ribes odoratum*)
'NorthSky' and 'NorthBlue' dwarf highbush blueberries (*Vaccinium corymbosum* 'NorthSky' and 'NorthBlue')

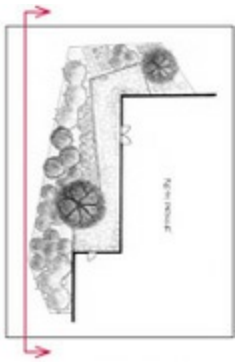
Cornelian cherry (*Cornus mas*)

ORNAMENTALS

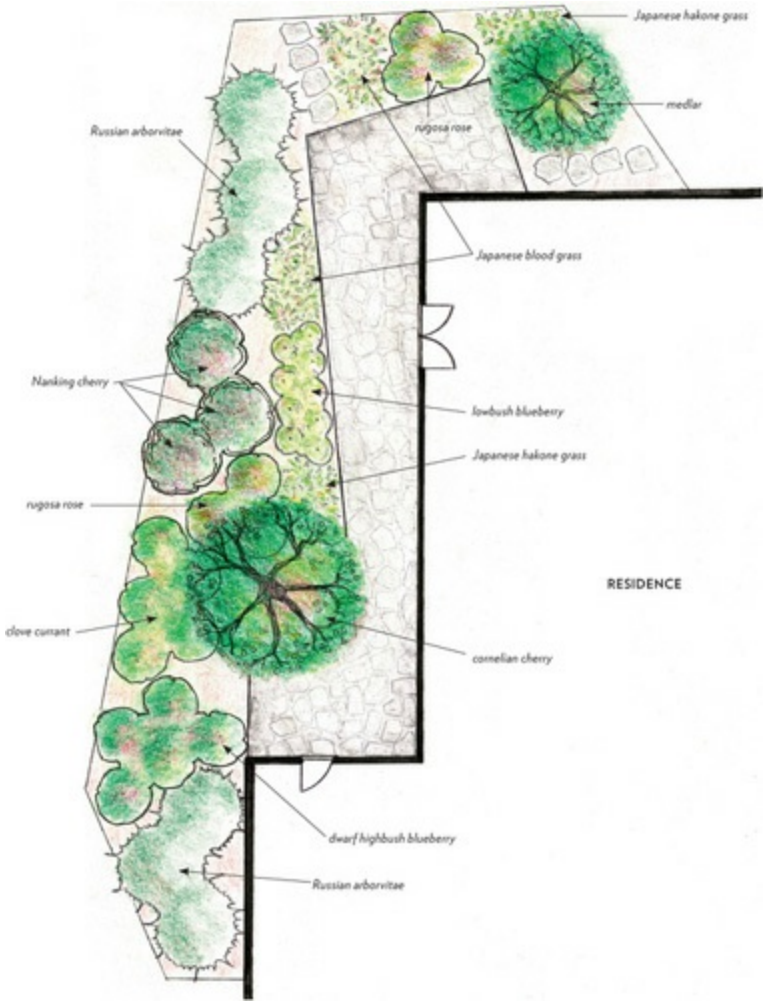
Japanese hakone grass (*Hakonechloa macra* ‘Aureola’)

Russian arborvitae (*Microbiota decussata*)

Japanese blood grass (*Imperata cylindrica* ‘Rubra’)



SIDE ELEVATION



A Children's Garden

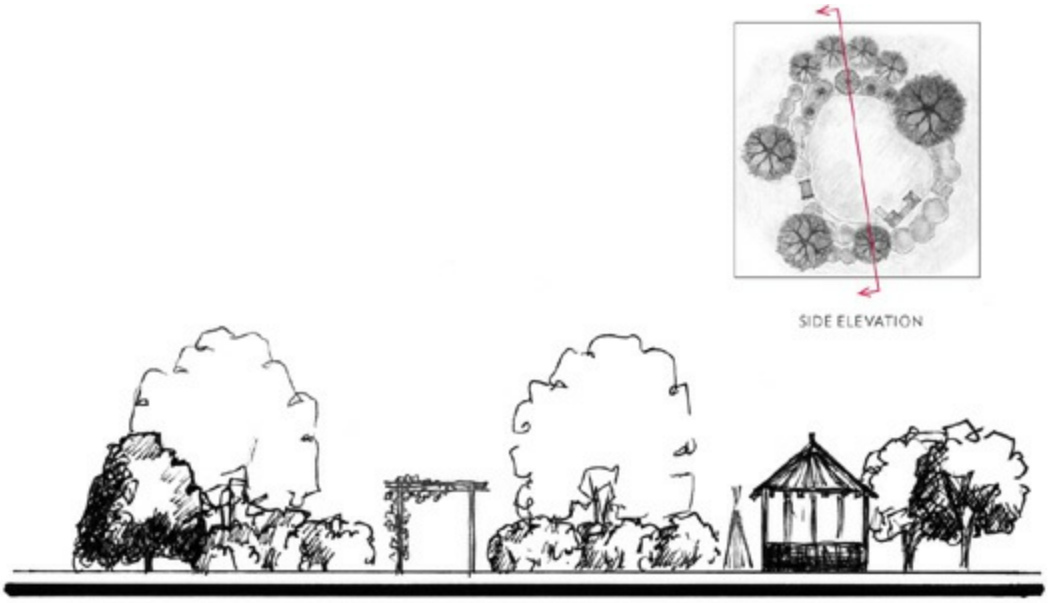
This lush, warm-climate garden (Zones 7–10) is not just for children, but it features elements that are especially appealing to them. I designed spaces and chose elements to provide a sense of enclosure and specific vantage points—places to play hide-and-seek. In addition to the typical play structure, there's a secret hideaway enclosed by midsize shrubs, a tightly woven arbor (made of pliable willow saplings); dwarf fruit trees; thornless blackberries grown on teepee structures; a pergola-covered sitting area from which adults may watch the children; and a mature climbing tree. A secret, child-size pathway winds its way behind the shrub areas. A small, open lawn area provides a green oasis for a ball toss, some kickball, and just running barefoot!

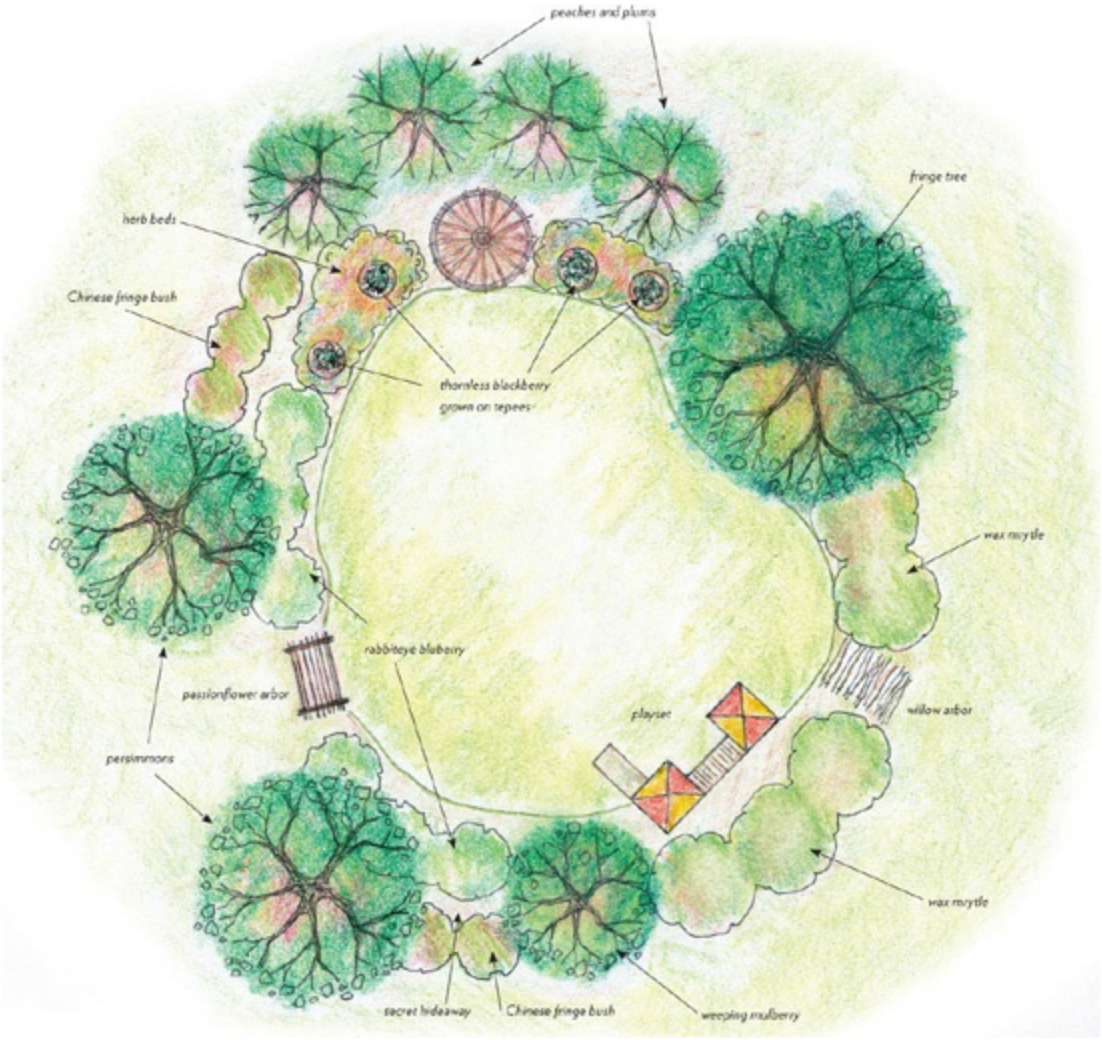
EDIBLES

Weeping mulberry (*Morus alba* 'Pendula')
Thornless blackberry (*Rubus* sp.)
'Premier', 'Climax', and 'Austin' rabbiteye blueberries (*Vaccinium asheii* 'Premier', 'Climax', and 'Austin')
Wax myrtle (*Myrica cerifera*)
'Stanley' plum (*Prunus* 'Stanley')
'Golden Jubilee' peach (*Prunus persica* 'Golden Jubilee')
Passionflower (*Passiflora edulis*)

ORNAMENTALS

Fringe tree (*Chionanthus virginicus*)
Chinese fringe bush (*Loropetalum chinensis*)




peaches and plums
fringe tree
herb beds
Chinese fringe bush
thornless blackberry
grown on tepees
wax myrtle
rabbiteye blueberry
passionflower arbor
playset
willow arbor
persimmons
wax myrtle
secret hideaway
Chinese fringe bush
weeping mulberry

A luscious landscape can include familiar plants like sweet cherries and black raspberries, or more unusual fruits like hardy kiwi.

GUIDE TO FRUITING LANDSCAPE PLANTS

WHAT FOLLOWS IS AN ENCYCLOPEDIA OF FRUIT PLANTS THAT I CONSIDER GOOD for luscious landscaping in temperate climates—that is, climates having distinct winter and summer seasons. Each fruit listing offers pretty much all that you need to know about growing that particular plant, such as where to grow it to provide fruit and beauty with minimal care, what the plant looks like through the year, what the fruit tastes like as well as when and how to harvest it, and any special details on cultivation.

Two grains of salt are needed with the information provided with each fruit entry. Take the first grain of salt with "Yield." These yields are averages, usually gleaned from what's been reaped when fruits were grown strictly for their fruits, which usually means without elbowing their way in among other plants in a landscape. Yields also vary with variety and location. Take the second grain of salt with "AHS Heat Zones." These heat zones were developed recently and should still be considered works in progress, especially because here we must consider the effect of heat not only on a plant's growth and survival but also on fruit production and quality.

Subjectivity was unavoidable in selecting which fruits made it to this list. Elderberries are borne on attractive bushes, but I consider what little flavor the fruit possesses to be not that good anyway, so elderberry isn't here. Hackberry is on the list because I'm especially fond of its bark, and its fruits' flesh, what little there is of it, is sweet like a date.

The most subjective, and also perhaps the most useful, part of this encyclopedia section is the "Luscious Landscape Index" I've assigned to each plant. This rating unscientifically combines a number of factors, such as fresh flavor of the fruit, the expertise and care needed to grow the plant successfully, susceptibility to spring frosts, and just how long through the season the plant remains visually attractive or how spectacular it is at a given season. After simmering together all these attributes of a plant, I pluck out a number 1, a number 2, or a number 3. A plant gets a number 1 if it looks great and has great-tasting fruit with minimum, or no, care. This is not to say that a plant with a Luscious Landscape Index of 2 or even 3 is unworthy for our purposes; many fruits, remember, didn't make this list at all. Consider the Luscious Landscape Indices to be like commercial egg sizes "jumbo," "extra large," and "large," with 3 representing a good luscious landscape plant, 2 a very good luscious landscape plant, and 1 an excellent luscious landscape plant. I almost went to fractional ratings, such as making cornelian cherry 1.5 rather than 1 because I usually find its fruit too tart, but restrained myself because that would create an impression of more objectivity in the rating than actually exists.

In addition to common names, I also offer botanical names in order to avoid confusion. For instance, some blueberries are sometimes called huckleberries. If you really want huckleberries, you want *Gaylussacia* species, not *Vaccinium* species, which are blueberries. Variety lists at the end of each fruit section are not exhaustive. Rather, they include varieties that are notable because they are particularly pest resistant, particularly tasty, or particularly beautiful, or possess other special qualities.

The tips on growing each plant relate to growing it as a fruiting landscape plant. So although a book could be written on managing insect and disease pests of apples, I touch only briefly on some of these pests because, for luscious landscaping purposes, I recommend growing apples only in regions where those pests are absent or minimal.

You'll see that the final category includes "use." As mentioned previously, many of these luscious landscape fruits could make excellent jams, tarts, and the like, but, as nature's desserts, they're mostly excellent right off the plant and into your mouth. I'm reminded of a question posed to me following a fruit presentation that I gave to the staff of a very posh restaurant. Among the fruits I showed and described was an uncommon one, the pawpaw. One chef's question was "What would be the application for this fruit?" My response: "To the mouth."

I'll generally leave other "applications" to, quoting the 16th-century herbalist John Gerard, "those that are skillful in Cookerie [who] can better tell than my selfe."

Maypop's breathtaking blossoms are followed by flavorful fruits.

AN OVERVIEW OF LUSCIOUS LANDSCAPE PLANTS

Common Name	Latin Name	Yield	USDA Hardiness Zones	AHS Heat Zones	Pollination Needs	Landscape Use	Most Prominent Ornamental Qualities
Alpine strawberries	*Fragaria vesca*	½ cup per plant	3–10	8–2	self-fruitful	ground cover or low border	low mounds or lines of greenery
Apple and crab apple	*Malus* spp.	60–300 pounds per tree	3–9	variable	cross-pollination needed	specimen or shade tree	blossoms, tree form
Apricot	*Prunus armeniaca* var. *armeniaca*	150 pounds per tree	5–9	8–2	most varieties are self-fruitful	specimen or shade tree	blossoms, tree form
Autumn olive	*Elaeagnus umbellata*	30 pounds per bush	3–7	8–2	partially self-fertile	specimen shrub or hedge	leaves, fruits
Beach plum	*Prunus maritima*	highly variable	3–8	7–3	cross-pollination needed	part of shrub border	blossoms
Blackberry	*Rubus* spp.	3 pounds per plant	5–8	9–2	self-fruitful	train along a fence or trellis, or tie up to a pole	blossoms, leaves
Blueberry							
highbush	*Vaccinium corymbosum*	7 pounds per plant	4–7	7–1	self-fruitful, but cross-pollination increases yield and berry size	shrub border, foundation planting or hedge	blossoms, leaves in summer and fall, canes in fall
lowbush	*Vaccinium angustifolium*	5–10 pounds per 100 square feet	3–7	8–1	self-fruitful, but cross-pollination increases yield and berry size	ground cover	blossoms, leaves in summer and fall, canes in fall
rabbiteye	*Vaccinium ashei*	15 pounds per plant	7–9	9–2	self-fruitful, but cross-pollination increases yield and berry size	specimen shrub, foundation planting or hedge	blossoms, leaves in summer and fall, canes in fall
Cherry							
cornelian	*Cornus mas*	30–50 pounds per plant	4–8	8–4	self-fruitful, but cross-pollination increases yield	shade tree	blossoms, leaves in summer and fall, fruits in summer, bark in winter
Nanking	*Prunus tomentosa*	15–25 pounds per bush	3–6	7–1	cross-pollination needed	shrub border, hedge	blossoms in spring, fruits in early summer
sweet	*Prunus avium*	500 pounds per full-size tree	5–9	8–1	most varieties need cross-pollination	specimen or shade tree	blossoms, tree form
tart	*Prunus cerasus*	100 pounds per tree	4–8	8–1	self-fruitful	small specimen tree	blossoms
Currant							
clove	*Ribes odoratum*	4–8 pounds per shrub	4–8	9–3	self-fruitful, but cross-pollination increases yield	shrub border, hedge	blossoms
red, white, or pink	*Ribes petraeum, R. rubrum, R. sativum*	5–10 pounds per shrub	3–7	7–1	self-fruitful	hedge, foundation planting, or espalier	blossoms, leaves in summer, fruits
Gumi	*Elaeagnus multiflora*	10 pounds per shrub	4–9	8–2	self-fruitful	hedge	leaves in summer, fruits
Grapes							
European wine	*Vitis vinifera*	10–30 pounds per vine	7–10	variable, depending on species and variety	self-fruitful	train over an arbor or fence	canopy of leafy branches, trunk (with age)
fox	*Vitis labrusca*	10–30 pounds per vine	3–7	variable, depending on species and variety	self-fruitful	train over an arbor or fence	canopy of leafy branches, trunk (with age)

Common Name	Latin Name	Yield	USDA Hardiness Zones	AHS Heat Zones	Pollination Needs	Landscape Use	Most Prominent Ornamental Qualities
muscadine	*Vitis rotundifolia*	10–50 pounds per vine	7–9	variable, depending on species and variety	most varieties need cross-pollination	train over an arbor or fence	canopy of leafy branches, trunk (with age)
Hackberry	*Celtis occidentalis*	unknown	2–9	9–1	self-fruitful	specimen or shade tree	bark, tree form
	Celtis australis	unknown	7–9	8–6	self-fruitful	specimen or shade tree	bark, tree form
	Celtis laevigata	unknown	5–11	9–3	self-fruitful	specimen or shade tree	bark, tree form, leaves in fall
	Celtis reticulata	unknown	4–10	9–1	self-fruitful	specimen or shade tree	bark, tree form
Huckleberry	*Gaylussacia baccata*	unknown	3–8	7–1	probably partially self-fruitful, but cross-pollination increases yield	foundation planting or mixed shrubbery	flowers
Juneberry (serviceberry, Saskatoon, shadbush)	*Amelanchier* spp.	10 pounds per plant	3–8	7–1	self-fruitful, except for white-fruited varieties	hedge or loose, naturalistic plantings, specimen trees or shrubs	blossoms, form of tree or shrub, fall color, bark in winter
Jujube	*Ziziphus jujuba*	60 pounds per plant	6–9	11–5	most varieties need cross-pollination	specimen plant or hedge	leaves in summer
Kiwifruit	*Actinidia deliciosa*	50–200 pounds per plant	7–9	9–6	cross-pollination needed	climbing vine for arbors and trellises	canopy of leafy branches, trunk (with age)
golden	*A. chinensis*	50–200 pounds per plant	8–10	10–8	cross-pollination needed	climbing vine for arbors and trellises	canopy of leafy branches, trunk (with age)
hardy	*A. arguta*	50–200 pounds per plant	4–9	9–4	cross-pollination needed	climbing vine for arbors and trellises	canopy of leafy branches, trunk (with age)
super-hardy	*A. kolomikta*	50–200 pounds per plant	3–7	7–3	cross-pollination needed	climbing vine for arbors and trellises	canopy of leafy branches, variegated leaves, trunk (with age)
Lingonberry	*Vaccinium vitis-idaea*	5–10 pounds per 100 square feet	4–7	6–1	self-fruitful, but cross-pollination increases yield	ground cover	evergreen leaves, flowers (two seasons), fruits
Maypop	*Passiflora incarnata*	12 fruits per plant	5–10	12–4	cross-pollination needed	climbing vine for arbors and trellises	flowers
Medlar	*Mespilus germanica*	20 pounds per tree	5–8	9–4	self-fruitful	specimen tree planted singly or in a mixed border	flowers, fall color of leaves
Mulberry							
white	*Morus alba*	5–25 pounds per plant	5–8	9–3	self-fruitful	specimen or shade tree	glossy leaves
black	*Morus nigra*	5–25 pounds per plant	7–10	9–4	self-fruitful	specimen of shade tree	tree form
red	*Morus rubra*	5–25 pounds per plant	5–8	9–3	self-fruitful	specimen or shade tree	tree form
Pawpaw	*Asimina triloba*	25 pounds per plant	4–8	8–5	cross-pollination needed	specimen or shade tree	leaves all summer and in fall
Peach and nectarine	*Prunus persica*	50–150 pounds per tree	5–9	9–4	most varieties are self-fruitful	small specimen tree, mixed border	blossoms
Pear							
European	*Pyrus communis*	60–300 pounds per tree	4–9	9–3	most varieties need cross-pollination	specimen or shade tree	blossoms, leaves in summer and fall
Asian	*P. pyrifolia*, *P. ussuriensis*, *P. × bretschneideri*	60–300 pounds per tree	4–9	9–3	most varieties need cross-pollination	specimen or shade tree	blossoms, leaves in summer and fall

Common Name	Latin Name	Yield	USDA Hardiness Zones	AHS Heat Zones	Pollination Needs	Landscape Use	Most Prominent Ornamental Qualities
Persimmon							
oriental	*Diospyros kaki*	40–400 pounds per tree	7–10	10–7	some varieties are self-fruitful	specimen or shade tree	tree form, fruit
American	*Diospyros virginiana*	50–100 pounds per tree	4–10	9–4	some varieties are self-fruitful	specimen or shade tree	tree form, leaves in summer and fall, fruit
Plum							
American hybrids	*Prunus* spp.	50–100 pounds per tree	variable	8–2	cross-pollination needed	bushy tree	blossoms
European	*Prunus domestica*	75 pounds per tree	4–8	8–3	self-fruitful, but cross-pollination increases yield	specimen or shade tree	blossoms
Oriental	*Prunus salicina*	75 pounds per tree	6–10	9–3	cross-pollination needed	specimen or shade tree	blossoms
Quince	*Cydonia oblonga*	75 pounds per plant	5–9	9–3	self-fruitful	small specimen tree or shrub, shrub border	blossoms, fruits
Raisin tree	*Hovenia dulcis*	5–10 pounds per plant	6–10	8–4	self-fruitful	specimen or shade tree	leafy form
Rose hips							
prickly rose	*Rosa acicularis*	4 pounds per plant	2–9	9–1	self-fruitful	shrub border	flowers, fruits
dog rose	*Rosa canina*	4 pounds per plant	3–10	9–1	self-fruitful	shrub border, trained on fence or post	flowers, fruits
sweetbrier rose	*R. eglanteria*	4 pounds per plant	4–10	9–1	self-fruitful	shrub border, trained on fence or post	flowers, fruits
Moyes rose	*R. moyesii*	4 pounds per plant	5–10	9–1	self-fruitful	shrub border, trained on fence or post	flowers, fruits, leaves in summer
rugose rose	*R. rugosa*	4 pounds per plant	3–10	9–1	self-fruitful	shrub border, hedge	flowers, fruits
apple rose	*R. villosa*	4 pounds per plant	5–10	9–1	self-fruitful	shrub border, hedge	flowers, fruits
Russian olive	*Elaeagnus angustifolia*	20 pounds per plant	2–7	8–2	self-fruitful	specimen tree, large hedge	leaves in summer, fruits ('King Red')
Seaberry	*Hippophae rhamnoides*	20 pounds per plant	3–7	8–2	cross-pollination needed	specimen hedge, shrub border	leaves in summer, fruits
Shipova	*× Sorbopyrus auricularis*	50 pounds per tree	4–9	8–3	probably self-fruitful	specimen tree	flowers, leaves in summer
Sorbus							
sorb tree	*Sorbus domestica*	30 pounds per tree	6–10	8–6	self-fruitful	specimen or shade tree	leaves in summer and fall
whitebeam	*Sorbus aria*	30 pounds per tree	5–9	8–6	self-fruitful	specimen or shade tree	leaves in summer and fall, fruits
Korean mountain ash	*Sorbus alnifolia*	30 pounds per tree	4–7	8–3	self-fruitful	specimen or shade tree	leaves in summer and fall, fruits
Yu's mountain ash	*Sorbus yuana*	30 pounds per tree	4–7	8–3	self-fruitful	specimen or shade tree	leaves in summer and fall, fruits
Wintergreen	*Gaultheria procumbens*	unknown	3–6	6–1	self-fruitful	ground cover	evergreen leaves, fruits

ALPINE STRAWBERRY

Fragaria vesca

Alpine strawberries are diminutive cousins of common garden strawberries. They have pointier fruits and more-intense flavor with hints of pineapple. Some varieties bear fruits that are creamy white.

YIELD ½ cup per plant

USDA COLD HARDINESS ZONES 3–10

AHS HEAT ZONES 8–1

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 1 (low-maintenance, insect- and disease-resistant, tidy little plants; luscious fruits throughout the growing season)

REGIONS OF BEST ADAPTATION Alpine strawberries can be grown just about everywhere.

PLANT SIZE AND GROWTH HABIT Like other strawberries, alpine strawberries are herbaceous perennials, forming mounds of green leaves 6 to 8 inches across and 6 inches high. Unlike most other strawberry species, however, alpines don't spread by runners (trailing stems) that root at their tips. Mounds of greenery that stay in place make alpine strawberries nice edging plants. I pluck them from along the main path of the vegetable garden as I pass on my way to harvest vegetables.

‘Alexandria’ strawberry

SEASONS OF VISUAL INTEREST Alpine strawberries are attractive landscape plants of quiet beauty. The mounds of greenery look fresh except during the cold weather of winter. Small white blossoms appear in spring and continue to do so throughout the growing season. The flowers are followed by fruits, somewhat attractive if they are a red variety, innocuous if they are a white variety. All in all, the main landscape asset of this plant is as small mounds of greenery or to delineate a border as a strip of greenery.

GROWING TIPS Alpine strawberries are at their best in soil that is well drained and rich in humus where the sun shines at least 4 hours each day in summer (making the border of the path in my vegetable garden a perfect place for them). The plants have shallow roots that compete poorly with weeds and don’t reach far for moisture. Maintain an organic mulch to check weed growth and retain soil moisture as well as to keep enriching the ground with humus and nutrients. Some supplemental watering will still be necessary in a dry season, especially if you want to keep the plants bearing well all season long.

The first blossoms open early, so they are often threatened by late frost. The plants bloom and fruit all season long; thus, you still get plenty of fruit even if those first blossoms get nipped. Instead of giving up those early fruits, though, you can save them by merely throwing some straw or a blanket over the plants on that frosty night.

Alpine strawberries are no more difficult to grow in pots than most houseplants and placing them at a sunny window or in a greenhouse can extend the harvest season well into autumn, through winter, and on into early spring. I've fruited these plants in pots as small as 3 inches across. Use any standard potting mix, and water and fertilize the plants more often as growth and fruiting increase. Indoors, it's necessary to hand-pollinate by dabbing the centers of each of the blossoms as it opens with an artist's brush. Keep an eye out for whiteflies and aphids on indoor plants.

Alpine strawberry's leaf and fruit stalks are attached to the crown of the plant, which is actually a stem that's been telescoped down to a very short length. Even this foreshortened stem does elongate, slowly, and as it does, the plant becomes less productive and more susceptible to drying out and cold damage. At that point, you could dig up the dormant plant and divide it, replanting the younger side branches of this stem along with their attached roots. It's usually better to just start with new plants, however, either purchased or started from seeds from harvested fruits. The plants are easy to grow from seed once you get the admittedly slow seedlings going—and you'll get your first harvest in summer from spring-sown seeds. The plants also self-seed moderately, so you can instead just dig up and replant some self-sown seedlings.

The major pest of alpine strawberries is birds, which eat the red fruits at their first hint of redness, too often cheating you from getting to taste thoroughly ripened fruits. Birds tend to avoid white-fruited varieties, one reason I prefer these over the red ones.

VARIETIES Nurseries offer perhaps a dozen varieties of alpine strawberries. Some are red-fruited and some are white-fruited. After growing a number of varieties, I have found that all the red ones taste pretty much alike, that all the white ones taste pretty much alike, and that the red ones taste decidedly different from the white ones. I prefer the white ones; they are more pineapple-y.

HARVEST, STORAGE, AND USE The fruits taste like cotton soaked in lemon juice until they're dead ripe. Red varieties obviously turn red when ripe; white varieties turn creamy white or slightly yellowish and their seeds darken. A fruit's strong aroma also tells you that it's ripe. Ripe alpine strawberries are very soft and perishable, so don't plan on storing them. Small size, perishability, and intense flavor make the garden the perfect place to eat alpine strawberries, right as you harvest them.

APPLE AND CRAB APPLE

Malus pumila and others

Apples are so familiar as to not need any description. But lest any of us become too smug about our familiarity with this fruit, let's keep in mind that apples exist in more than 5,000 varieties of varying sizes, appearances, and flavors! Any variety of apple producing fruits less than 2 inches in diameter is, by definition, a crab apple. *Malus pumila* is the usual designation for apple, although other species have entered the picture during this fruit's evolution; crab apples are represented by a number of different species of *Malus*.

'Double Red Stayman' apple

‘Red Jade’ weeping crab apple

YIELD 60 to 300 pounds per tree, depending on tree size

USDA COLD HARDINESS ZONES 3–9

AHS HEAT ZONES Variable

POLLINATION Cross-pollination needed; varieties with sterile pollen, such as ‘Gravenstein,’ ‘Jonagold,’ ‘Mutsu’ (‘Crispin’), ‘R. I. Greening,’ ‘Spigold,’ ‘Stayman Winesap,’ and ‘Winesap,’ cannot pollinate others.

LUSCIOUS LANDSCAPE INDEX 3 (beautiful in bloom and craggy old trees can be picturesque, but requires regular and careful pruning and fruit thinning; some pests cause damage even in the best regions; leaves often look increasingly ragged as season progresses)

REGIONS OF BEST ADAPTATION As trees, apples are widely adaptable, with some varieties thriving in subtropical regions, some in frigid regions, and many everywhere in between. The key phrase here is “some varieties”: In colder and warmer regions, consider the chilling requirements of a variety (most need more chilling than afforded in subtropical climates) as well as the length of the season needed to ripen the fruits. Even then, there are varieties regionally adapted because the local climate brings out the best flavor. Few crab apples have been selected or bred for fruiting in warmer regions.

Apples and crab apples are much less adaptable when it comes to growing them for *fruit*, especially for luscious landscaping, where pesticide sprays must be avoided. The major insect pests of apple are plum curculio, apple maggot, and codling moth; the major diseases are fire blight, cedar apple rust, and scab. In general, these insect and disease problems are serious enough to necessitate spraying apples growing east of the Rocky Mountains. Therefore, as beautiful and tasty as an apple tree can be under the best conditions, I recommend against growing them east of the Rockies unless you’re willing to invest the time and energy to learn about and then control apple pests.

PLANT SIZE AND GROWTH HABIT As one of the oldest and most widely cultivated of fruits—some people might say apple was the “original” fruit—apples have been developed in a variety not only of fruit shapes, colors, and flavors, but also of tree sizes. Except in the case of the few varieties that are naturally dwarf because of their genetics, dwarf trees are made so by grafting. A stem of a particular variety is grafted onto a special dwarfing rootstock and the resulting tree, from the graft upward, is of that variety now kept from growing too big. The fruit itself is not dwarfed. Many varieties of crab apple are naturally dwarf but they aren’t the ones that bear the bests fruits for eating.

A number of dwarfing rootstocks exist, each imparting its own degree of dwarfness to whatever is grafted onto it. The smallest is ‘M27’ (“M” stands for Malling, the name of the apple research station where the various rootstocks were sorted out about a century ago), resulting in a tree that matures at about 6 feet high. Next larger are ‘P-22’, ‘M9’, and ‘Bud 9’, their sizes going from

slightly larger than M27 up to about 10 feet tall. Semidwarfing rootstocks result in larger size trees, up to that of a "standard" tree, which is a full-size apple tree, about 25 feet tall and what you usually get if you plant an apple seed or graft a stem of any variety onto that seedling.

Apple varieties themselves vary somewhat in their growth habit; some are more upright ('Red Delicious', for example) and others are more spreading ('Golden Delicious', for example). Still, apple trees generally take on a spreading form, especially with age as the fruit weighs down the branches.

SEASONS OF VISUAL INTEREST An apple or crab apple tree is most dramatic in spring, when its flower buds burst into pinkish white blossoms. Bloom can be prolific because each bud opens to become five flowers.

Beyond bloom time, apple is more subdued as a landscape plant. The fruit could create a late-summer and autumn show, I suppose, but fruit appearance is a poor criterion for picking a variety for your yard. That said, I can't help mentioning one particularly beautiful apple fruit, 'Hudson's Golden Gem', which I would almost grow solely for its good looks. The skin is not golden yellow like the familiar 'Golden Delicious', but looks as if it's been flecked with gold dust. 'Hudson's Golden Gem' also has superb flavor. Many crab apples have been selected for their flamboyant show of fruits.

For landscape use, there's something to be said for both dwarf and full-size apple trees. The dwarfs can, for example, be tucked into shrub borders or stand sentinel at garden gates. How about a block of half a dozen 6-foot-high trees planted as a droll, miniature "orchard"? Large apple trees make excellent specimens, especially when pruned and with their loose bark scraped off. (Scraping the bark also limits pests and is easily accomplished with a balled-up wad of poultry netting.) The muscular, spreading limbs of a wizened apple tree are not only picturesque but also excellent on which to climb or hang swings. Of course, it takes some time for an apple tree to grow large enough to develop bold character.

GROWING TIPS Plant apples and crab apples in full sun in relatively good soil. The young trees are adaptable to a number of forms.

Apples require more care than most other fruit trees. Even in the relatively pest-free West, it's wise to keep an eye out for pests. Among crabs, those best for eating are, unfortunately, also those more susceptible to pests. The easiest way to control diseases such as powdery mildew, scab, and fire blight on apple is to plant a resistant variety, such as 'Liberty'. (Note that disease-resistant varieties are not insect resistant.) A site bathed in sun and gentle, drying breezes also helps. Codling moth—the worm in the apple—is the fruit insect most likely to be encountered in the West, but damage is often limited to a tolerable percentage of fruits and further limited if developing fruits are thinned so that no two will be touching as they expand to full size.

Speaking of which, apples also need be thinned if you want to reap the best-quality fruit. That snowball of blossoms in spring leads to many more fruits than a tree could plump up to good size and flavor. Abundant fruit set is the tree's insurance policy against all the ills that could befall young, developing fruits. Fruit set of only about 5 percent of flowers is all that's needed for a full crop. Thin fruits to about 8 inches apart, and the sooner you do so, the better because more fruits on the tree one year, the fewer the next year, so much so that some varieties readily adopt the bad habit

of settling into years of alternating feast and famine.

Mature apple trees require a moderate amount of annual pruning. Most varieties bear their fruits on spurs, which are stubby branches elongating only about a ½ inch per year. Because spurs grow off wood that is more than two years old, a bearing apple tree needs little new growth to keep fruitful. Completely cut away, right to their base, overly vigorous, upright stems, which are most prevalent high in the tree, as well as weak twigs, which often hang down from the undersides of limbs. Shorten stems that become too droopy, especially those low in the tree. After about 10 years, those fruiting spurs become overcrowded and decrepit, so give them room and invigorate them by removing some and shortening others. When a whole limb of fruiting spurs declines with age, cut it back to make room for a younger replacement. In general, crab apple trees require less pruning than do apple trees.

A few apple varieties, such as 'Cortland' and 'Idared', bear fruits not on spurs, but rather at the ends of willowy stems about 6 inches long. Avoid shortening too many stems of these varieties on mature trees or you'll end up cutting off too much of your potential crop. Leave stems of moderate length, and encourage compactness and branching by shortening very long stems instead.

APPLE VARIETIES

'Beverly Hills' The fruits are small to medium in size, with a good-quality, tart flesh that resembles that of 'McIntosh'. The skin is pale yellow splashed with red. This variety dislikes hot weather and is moderately well suited to the Southern California coastal climate. A low-chill variety of apple.

'Calville Blanc d'Hiver' Grown more than 300 years ago in the garden of King Louis XIII, this fruit, with a smooth light skin that looks almost like porcelain, is lobed into segments like those of an orange. The tender, spicy flesh, with just a hint of banana, blends well with cheese for dessert.

'Cornish Gilliflower' This is an ugly apple, russeted brownish red over an olive base, but its flavor is supreme—a rich sweetness with a hint of clove.

'Cox's Orange Pippin' In England, where apple is king, 'Cox's Orange Pippin' is grown in spite of occasional problems with small fruit, low yields, sunscald, cracking. The skin, orange and red washed with carmine over a yellow background, encloses a sprightly flavored flesh. This variety grows best in cool summers.

'Ein Sheimer' This fruit is similar to 'Golden Delicious', with a yellow skin having a slight blush and a crisp, sweet-tart flesh. It's resistant to scab and well suited to hot climates. A low-chill variety of apple.

'Esopus Spitzenburg' The apple does not have the appearance needed for today's commercial market but, as William Coxe said in 1817, Spitz "possesses great beauty, and exquisite flavour." The crisp fruit has a skin of a rich yellow, covered with a commingling of bright and dark red and a vibrant, somewhat tart flavor. Thomas Jefferson preferred 'Spitzenburg' to all other apples. Pests, however, also enjoy this variety.

'Hudson's Golden Gem' This sweet but not cloying apple is also, as already mentioned, a beautiful apple. It's worth growing even though it doesn't keep well and sometimescracks while ripening. It grows well in the North and the South (it needs only 550 hours of chilling).

'Jonagold' Enjoy the combination of the sprightly 'Jonathan' and the aromatic 'Golden

Delicious' flavors. The large fruits are yellow with a splash of light scarlet. The fruits are often *too* large and an apple plucked from a sun-drenched branch will be decidedly more flavorful than one from the shaded portion of the tree. 'Jonagold' has a cracking texture—the fruits are crisp, but when you bite into one, it explodes in your mouth with juice and flavor.

'Liberty' This large red apple has a delicious, sweet-tart flavor, similar to that of 'Macoun'. The flavor improves in storage. This variety bears at an early age and is productive. In addition to the aforementioned qualities, 'Liberty' is very resistant to the three major apple diseases.

'Mutsu' ('Crispin') This variety, a cross of 'Golden Delicious' and 'Indo', is large, round, and yellow with a delicate, spicy flavor. The texture is pleasantly coarse, reminiscent of biting into a snowball.

'Newtown Pippin' With a yellowish green skin, often russeted, and with white dots, this variety is not much to look at. But the yellowish flesh has an excellent, sprightly aromatic flavor with refreshing piney tartness. It ripens late, and even then is not at its best. Don't start eating this variety until after New Year's Day.

'Winter Banana' This beautiful fruit—clear yellow with a pinkish blush—was once widely used in fruit baskets. The flavor is aromatic and the slightly yellowish flesh does have hint of banana. This low-chill apple variety stores well.

CRAB APPLE VARIETIES

For luscious landscaping, a crab apple must be truly edible. Many aren't because they're too small and/or just taste bad without extensive doctoring up in the kitchen. The following are among the more tasty crab apples for fresh eating.

'Centennial Crab' This variety is susceptible to scab but resistant to cedar–apple rust disease. The yellow-and-red fruit is pleasantly sweet-tart.

'Chestnut Crab' This apple is susceptible to scab but resistant to cedar–apple rust disease. The red-striped, slightly russeted skin encloses a crisp, juicy, spicy flesh that has a delicious, nutty flavor.

'Whitney' Originating around 1865, this is perhaps the best known of the edible crabs. The yellow, red-striped fruit is juicy, crisp, and sweet-tart, but eat it quickly because it soon turns mushy.

HARVEST, STORAGE, AND USE Apples are so well known that there's surely no need to describe how to use them. How to harvest them, though, is another story. There's a world of difference in flavor—and that peak flavor might last only a couple of days—between an apple that's picked at its moment of perfection and one that's picked just because, say, it's red. My 'Macoun' apples, which I retrieve first thing each morning from the dewy lawn, taste like a completely different variety from the 'Macoun' fruits I could buy from a nearby orchard. ('Macoun' is not on the apple list because of some difficulties in growing it.)

Harvesting from the ground is not generally practical and is unnecessary for peak flavor in other varieties. The way to harvest an apple is first to look at it to make sure any green has faded, then to grasp the fruit in your hand and lift it upward while giving the fruit a slight twist. The fruit stalk should separate easily from the branch; if not, leave the fruit on the tree to ripen longer.

Apples harvested from the ground or at just the right moment from the tree will not keep well. They're at their peak and starting downhill. So for storage, harvest the fruit slightly underripe, then keep it at near freezing temperatures and high humidity. A few late-ripening apples, such as 'Newtown Pippin' and 'Idared', actually improve in storage and aren't truly ready to eat until after New Year's Day.

APRICOT

Prunus armeniaca var. *armeniaca*

Apricots have a rounded shape, with a suture, and a slightly fuzzy skin. The flesh is dryish with, at its best, a rich sweet flavor.

YIELD 150 pounds per tree

USDA COLD HARDINESS ZONES 5–9

AHS HEAT ZONES 8–2

POLLINATION Most, but not all, varieties are self-fruitful

LUSCIOUS LANDSCAPE INDEX 2 (blossoms are beautiful and very early, attractive leaves; some pruning and attention to pests needed even in favored regions)

REGIONS OF BEST ADAPTATION

Pests and climate are the two devils that limit easy success for our purposes. One serious insect pest, the plum curculio (an insect catholic in its tastes), makes its home mostly east of the Rocky Mountains. Further limiting successful apricot growing east of the Rockies is humidity, which makes the fruits more susceptible to brown rot and other diseases.

Thus, we're left with the West as the most favorable region generally, but not everywhere in the West is equally welcoming. Apricots are native to cold-winter climates where subsequent spring weather warms steadily and reliably. Being adapted to such climates, apricots tend to come out of their dormancy quickly, leaving them prone to the later spring frosts that are so common in regions beyond their native range. Furthermore, fluctuating winter temperatures, also common in many areas, cause the trees to lose some cold-hardiness through winter, increasing winter-cold damage and susceptibility to diseases.

The ideal apricot climate has steadily cold winters, steadily warm springs, and low humidity. Still, the ripe fruit is so luscious and the tree can be so pretty that apricot may be worth a try in regions with less-than-perfect growing conditions.

‘Flora Gold’ apricot

SEASONS OF VISUAL INTEREST Apricot is one of the most dramatically beautiful trees in spring, as puffs of white or pink blossoms stand out against the dark bark of the branches. The blooms are all the more dramatic for their earliness. The tree is no less beautiful as the season progresses, although it is then less striking. I find the leaves very attractive, heart-shaped, light green in color, and with reddish stalks. The ripe, salmon-orange fruits add to the show in summer. Autumn leaf color is trivial, but the dark limbs look nice through winter on well-trained trees.

PLANT SIZE AND GROWTH HABIT At maturity, an apricot tree will grow to 15 feet in height with limbs spreading to about that same width. The trees are often not very long-lived but are fast growing, so they reach that size fairly rapidly.

GROWING TIPS Apricots thrive in full sunlight and well-drained soils that are near neutral or slightly alkaline in pH. (That said, my parents have a tree growing in some shade in a wet soil in New York. Despite this far-from-optimum site, the tree has set a crop of fruit almost every year for a quarter of a century. Unfortunately, squirrels take them all, while they’re still green, on about Father’s Day!)

Keep an eye out for pests even in favored regions. Oriental fruit moth, which makes a large hole in fruits and twigs, causing the latter to wilt, can be controlled with pheromone traps. A vigorously growing tree that’s not injured by winter cold or the lawn mower is least attractive to the boring (as in “making a hole”) insects that weaken branches and the trunk. If you find it decorative, you’ll also lessen damage from winter temperatures by painting the trunks and large limbs with white

latex paint diluted in half with water. Reflecting the sun's warming rays, the paint moderates temperature fluctuations of the bark. Limit the incidence of brown rot, which results in fuzzy, gray fruits, by picking off dried-up "mummies" that spread the disease the following year and by planting resistant varieties such as 'Alfred', 'Harcot', and 'Harlayne'.

Train the young apricot tree to an open-center or modified-central-leader form. Because apricots bear fruit on wood from one to three years old, prune a bearing tree enough to stimulate a moderate amount of new growth each year. Use a combination of heading and thinning cuts, striving to stimulate new shoot growth of 12 to 18 inches, and allow plenty of light to bathe all the branches. Cut away older wood, as well as diseased or dead wood. More-severe pruning will reduce your crop, but the fruits will be larger. Fruit thinning is unnecessary unless the crop is very heavy, in which case remove enough young fruits so that those that remain are about 2 inches apart.

HARVEST, STORAGE, AND USE Commercial apricots are picked while still firm, but you can pick yours when they're soft and ready to drop, or you can shake them down. Of course, such fruits will not keep well, only a week or two, so eat them quickly. Those firm, slightly underripe fruits will, by the way, soften with time but the end result is very different from that of a fruit that has ripened (which includes softening) on the tree.

VARIETIES

'Alfred' A New York introduction, 'Alfred' is more adapted to eastern growing conditions. The tree is productive, cold hardy, and vigorous. The medium-sized fruit is resistant to brown rot and has a sweet rich flavor. Sometimes the skin will have a pink blush.

'Blenheim' This old English variety is grown commercially in California for drying and canning. The tree requires only moderate chilling, so it blooms early, producing pale orange fruits that are sweet, aromatic, and very juicy.

'Harglow' Introduced by the Harrow Research Station in Canada, this tree is compact and blooms relatively late. The pure orange fruits are resistant to cracking and disease, and taste good fresh or cooked.

'Hargrand' Another introduction by the Harrow Research Station in Canada, this one is productive and cold hardy. The fruits are very large and orange, with a speckled blush and good flavor. They resist cracking and are somewhat resistant to disease.

'Harlayne' This Canadian variety is cold hardy, and produces medium-sized fruits with a red blush. The fruit has a good flavor and texture, and is moderately resistant to diseases.

'Moorpark' This old English variety is grown commercially in California for fresh eating, canning, and drying. The blossoms are early. The fruits are very large, juicy, and sweet, and ripen over a long period.

'Scout' This cold-hardy Canadian variety is quite vigorous. The smooth, mild, sweet fruits are good for fresh eating as well as making into jam.

'Tilton' This variety is grown in California for canning, drying, and fresh eating. The trees bloom relatively late. The fruits are heart-shaped with an orange-red blush. The flesh is fairly dry, mealy, and aromatic, with a good sweet flavor.

AUTUMN OLIVE

Elaeagnus umbellata

The silver-flecked, pea-sized red fruits each have a single seed surrounded by soft flesh that is sweet-tart and very pleasant to eat when thoroughly ripe right off the bush. Some varieties bear yellow fruits.

YIELD 30 pounds per bush

USDA COLD HARDINESS ZONES 3–7

AHS HEAT ZONES 8–2

POLLINATION Partially self-fertile

LUSCIOUS LANDSCAPE INDEX 2 (pretty leaves and flowers, low maintenance; good fruits but small and taste best during a narrow window of time)

REGIONS OF BEST ADAPTATION Autumn olive is adaptable almost everywhere, so adaptable, in fact, that it's listed as an *invasive plant* in many regions. Take note!

PLANT SIZE AND GROWTH HABIT Autumn olive grows to become a large, rounded shrub, usually about 10 feet high and wide, although some plants have been known to create a billowing mass of twice those dimensions. The branches are armed with short, sharp stems.

SEASONS OF VISUAL INTEREST The creamy yellow flowers of autumn olive are not individually notable, but massed they cast a pleasant—and fragrant—yellowish haze over the bush in spring. The leaves are neutral green on their uppersides and almost white on their undersides, giving the whole plant a silvery appearance that shimmers when the leaves flutter in a breeze. The fruits are small but produced in great profusion pressed right up against the stems.

Autumn olive

GROWING TIPS Autumn olive is a carefree plant that needs little more than sun, the more sun the better. Microorganisms associated with its roots even garner nitrogen from the air to feed the plant. Perhaps more important than optimizing its growing conditions is considering whether to plant autumn olive at all, because, as mentioned above, it's considered invasive in many places and may be legally restricted.

Still, autumn olive has much to recommend it as far as ease of care, beauty, and providing food for both humans and wildlife. Pretty much the only care that is needed is the removal of old, dead wood, when noticed, and even this job is for show rather than for boosting plant health or productivity.

HARVEST, STORAGE, AND USE For cooking, timing for harvest is not critical. For fresh eating, you want to catch the fruits when their sweetness has peaked, their astringency has plummeted, and all this before they drop. Usually, autumn olives present about a two-week window of opportunity for good fresh eating. Although some varieties rarely get sweet enough for me to eat, I know some children who always relish them. During those final stages of ripening, the pulp (but not the seed) also almost doubles in bulk. The single soft seed within each fruit is hardly noticed and can be eaten along with the fruit.

Autumn olives can, no doubt, be cooked into a number of delectable jams, jellies, and tarts.

VARIETIES

'Brilliant Rose' This is my favorite for flavor. Picked at the right moment, the berries are quite sweet.

'Cardinal' This variety was introduced for soil and wildlife conservation. It's especially tolerant of poor soils and a prolific producer of ¼-inch-sized fruits.

'Charlie's Golden' This presents a showy autumn display of yellow fruits that, except in years with long, warm autumns, never get sweet enough for me.

'Ellagood' This variety was selected for its ability to hang on to its fruits late into winter.

'Elsberry' This grows to be a very large bush, with fruits almost half an inch across, but it is not particularly cold hardy.

'Redwing' This variety has been billed as having fruits that are especially large and sweet; mine never get sweet enough for me to eat them straight up. The plant grows to about 12 feet high and is somewhat more cold hardy than are other autumn olives.

'Ruby' Large crimson fruits make this variety notable.

Too Much of a Good Thing?

Autumn olive and Russian olive are among the few luscious landscape fruits classified in some regions as invasive plants. Invasive plants are "foreigners" that, upon introduction into a region, thrive and multiply with such exuberance as to crowd out native plant species. The ripple effect on the ecosystem can result in a reduced number of both plant and animal species, even possible extinctions, with attendant changes in soil and microclimates. Although plants may naturally spread beyond their existing ranges, such spread is slow and often accompanied by insect and disease pests that keep plant populations in check—not the case when a species is suddenly introduced, inadvertently or deliberately, by humans.

Carefully consider the ramifications of planting a species into an area where it's considered invasive (including possible legal ramifications). Weigh the plant's qualities, gustatory and visual, against the hazards of its introduction. Always consider the option to forgo planting any invasive species; suitable alternative species almost always exist, such as gumi instead of autumn olive.

The ideal in such a situation, of course, is a variety of fruit that has sterile seeds, thus preventing its spread. Or no seed, as with certain persimmon varieties.

BEACH PLUM

Prunus maritima

Beach plums are true plums, a unique species with relatively small fruits. The largest beach plums are an inch or more across; most are about ⅝ of an inch across. Beach plums ripen late summer or in autumn. Few named varieties are available and they're often downright puckery, but a few clones bear larger fruits that are sweet with a good plum flavor. Usually, the fruits are deep blue with a white bloom. Some plants bear yellow fruits, and these tend to be less puckery.

YIELD Very variable
USDA COLD HARDINESS ZONES 3–8

AHS HEAT ZONES 7–3

POLLINATION Needs cross-pollination

LUSCIOUS LANDSCAPE INDEX 3 (abundant white blossoms in spring, nice foliage all summer; but crop is often poor, pests sometimes cause problems, only a few clones yield dessert quality fruits, and pruning may be needed)

Beach plum

Beach plum in full bloom

REGIONS OF BEST ADAPTATION Although native to the Atlantic shore line, beach plums grow well inland just about everywhere. Pests are less of a problem in the West because certain insects are less prevalent and drier air limits disease problems.

PLANT SIZE AND GROWTH HABIT Although variation exists from clone to clone, beach plum generally grows to become a medium-sized shrub (about 6 feet high) whose decumbent stems root where they touch the ground to generate an ever-expanding thicket. Grafted on an upright rootstock, beach plums can be grown as small trees.

SEASONS OF VISUAL INTEREST Springtime is the visual highlight of the year, a time when the profusion of blossoms smothers the plants in a spectacular show of fleecy white petals. Leaves come out after the blooms, and each is pointy and usually dull green on its upper side, slightly hairy and lighter-colored below. Beach plum is at its best in a naturalized situation where it can become the thicket it wants to be. If you're willing to prune regularly to contain the spreading plant, all sorts of other possibilities arise, such as a low hedge or a shrub within a flower bed. Grafted onto an upright, nonspreading rootstock, beach plum can be grown and utilized in the landscape like any other small flowering tree.

GROWING TIPS I might as well begin with beach plum's greatest shortcoming: its lack of reliable production. Some years bushes bear well, other years little or nothing, but beyond planting two

clones for cross-pollination, there's nothing you can do about it because no one knows for sure the reasons for this feast-or-famine behavior.

Yet beach plum—the plant—is very easy to grow. Do give it sun and well-drained soil, water and weed, as needed, its first season, and it should take care of itself from then on. As you might assume of a plant native to coastal areas, beach plum is quite resistant to salty air and soil.

You may eventually opt to do some pruning to keep the bush from spreading too far and, with age, to remove some of the oldest, most decrepit stems. Fruit is borne on one-, two-, and to a lesser extent three-year-old wood. A few cuts with a lopper near ground level should be all that's needed.

VARIETIES

Although a number of beach plum varieties were selected in the past, especially around the middle of the 20th century, when a burgeoning beach plum industry almost got started on Cape Cod, few varieties are available today. My enthusiasm for the fruit came following tasting a number of delectable selections at the Rutgers University experimental station. Interest in beach plum is again on the rise and some newer and older selections may become more widely available. Below are a few notable varieties, most of which are hard or impossible to find – for now, at least. The ripening times are for Massachusetts.

'Cotuit' This spreading bush grows only 2 to 3 feet high and bears abundant fruits ¾ of an inch to 1 inch in diameter with small seeds and a fine, sweet flavor. This variety is early ripening, often in late July.

'Eastham' ('HC-1248') 'Eastham' grows 3 to 4 feet high and is very spreading, but with strongly upright stems. It bears many purplish crimson fruits that are 1 to 1¾ inches in diameter and have a tart to mildly acidic flavor. The fruits ripen in early September.

'Hancock' ('HC-1244') This beach plum grows about 3 feet high and bears blue fruits with juicy, golden flesh and small pits. The fruits are ⅞ of an inch to 1 inch in diameter, have a sweet flavor, and begin ripening in the middle of August.

'Jersey' A vigorous variety, 'Jersey' is tree like, to 13 feet high. The reddish fruits have good flavor and ripen from late summer to early fall.

'Safford' ('HC-1252') This 4-foot-high bush yields heavy crops of deep blue, inch-wide fruits with good sweet flavor. They begin ripening in the middle of August.

'Snow' Notable for reliable production, this variety produces good-tasting fruits.

HARVEST, STORAGE, AND USE This book is about pretty plants that bear fruits so good that you'll usually be happy to just pop them off the plant and into your mouth. Some beach plums are like that. Beach plum's claim to fame, though, is jelly, a signature Cape Cod comestible and something you might consider making when an "on" year offers more beach plums than you, your family, and your friends can consume fresh.

BLACKBERRY

Rubus spp.

This aggregate fruit is sweet, juicy, and flavorful when ripe. It is different from a black raspberry (blackcap) in flavor and texture. You can also tell the fruits apart by the core within the thimblelike fruits; that core stays within the fruit of a harvested blackberry but stays on the plant, leaving a hollow in a harvested black raspberry.

YIELD 3 pounds per plant

USDA COLD HARDINESS ZONES 5–8

AHS HEAT ZONES 9–2

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 1 (low maintenance beyond some quick and easy pruning)

PLANT SIZE AND GROWTH HABIT Blackberries have perennial roots and biennial canes, the canes typically growing just leaves their first season, then flowering, fruiting, and finally dying during their second season. But don't be fooled by each cane's short life: They can grow quite long in a single season—typically a few feet, with some of the erect types to as long as 20 feet with some the trailing types. New plants that grow from the roots each spring might emerge a few inches to a couple of feet away from the mother plant.

‘Arapahoe’ blackberry

REGIONS OF BEST ADAPTATION Blackberries are found growing wild throughout North America and they similarly are suitable for luscious landscaping almost everywhere. Certain varieties, though, are best adapted to certain regions.

SEASONS OF VISUAL INTEREST Although blackberry canes are short-lived, and so never have time to develop craggy, picturesque trunks, the canes themselves contribute to the overall attractiveness of the plants. What the canes lack in age they make up for with youthful freshness from their smooth (when thornless), satiny sheen and forest green color. The leaves are also a rich, forest green and usually retain their healthy appearance all season long. Come autumn, leaves of some varieties (my very thorny ‘Darrow’, for one) turn a fiery, orange-red.

Even more showy than the leaves and stems are the white blossoms, which appear in late spring. Blackberry is in the rose family and the blossoms do indeed resemble small, single roses.

Growing the plants trained to some means of support is a good way to show off the canes and the flowers, as well as to keep the plants tidy and healthy. The plants look good trained along a split-rail fence, on a lattice mounted a foot off a wall, or up a decorative post.

GROWING TIPS Even though wild blackberries typically grow at the edges of forests, the plants yield better and are more healthy when sited in full sun. (Look more closely and you’ll see that

those wild plants are always trying to invade the adjacent, sunny fields.) They like the same soil conditions enjoyed by most other cultivated plants—that is, moist, well-drained ground rich in humus. It takes plenty of water to plump up these luscious berries, so irrigation helps in dry seasons and mulch helps always.

Training these plants to some sort of support is not mandatory but does make picking easier and keeps the plants tidier and healthier and the fruits cleaner. How far apart to space your plants depends on the type of blackberry and the support. For production purposes, erect types are typically planted 3 feet apart and trailing types 10 feet apart, but for landscaping purposes, plant them in such a way that they can put on their best show: up against a column, for instance, or against a trellis as a fan of greenery glazed, late each spring, with white flowers. With age, each plant will develop into a clump of canes.

Prune erect and semierect blackberries twice each year. In summer, pinch out the tips of new canes just as they reach a height of 3 feet. Pinching stimulates the growth of side branches, on which fruit is borne the following season. All canes do not reach this height simultaneously, so go over the planting a few times during the summer. Prune again in late winter, first removing, at ground level, all canes that fruited the previous season. You can identify those canes by the remains of old fruit stalks and the fact that the old bark is brown and cracking. (You could, instead, have cut them away in summer, right after harvest.) Also remove any young canes that are crowded, spindly, or diseased. Each clump, after pruning, should consist of no more than six canes. Finally, shorten the fruiting laterals to a length of 12 to 18 inches, allowing more growth on the heftier laterals because they can bear more fruit.

An option, if you're willing to sacrifice some yield for less work, is to forgo the first step, the summer pinching. Skipping this step also leads to lankier canes, which might look better in certain situations, such as sprawled up on a large lattice against a wall.

To prune trailing blackberries, first cut away any canes that have fruited. Do this right after harvest or when the plants are dormant. In late winter, thin out new canes to the most vigorous eight to ten per plant. Shorten overly long canes to 7 feet and laterals to between 12 and 18 inches.

Backyard blackberries generally suffer little from insect and disease pests. Pruning is important for keeping the canes exposed to light and air, thus avoiding dank conditions in which diseases thrive. Pruning also limits the spread of disease by removing infected stems, leaves, and fruits.

VARIETIES

To reduce the danger of "attack" from blackberry plants and to make harvesting and pruning most pleasant, I heartily recommend growing thornless varieties. Thorny types have thorns, all with reverse barbs, on their leaves as well as their stems! Those listed below are all thornless.

'Apache' These very productive plants have a very upright growth habit, so you can grow them without support. The fruits are medium-sized, sweet, and firm.

'Arapahoe' This has an erect growth habit. The fruits ripen early over a relatively short period and have very good flavor.

'Black Diamond' This trailing blackberry has very good flavor and is productive. It was bred in Oregon and its cold-hardiness is untested in regions cooler than Zone 8.

'Black Pearl' The fruit on this trailing blackberry is soft and has excellent flavor. It was bred in Oregon and its cold-hardiness is untested in regions cooler than Zone 8.

‘Black Satin’ This plant is semi-trailing and cold-hardy. The large fruits are slightly tart when ripe.

‘Chester’ One of the hardiest and most productive of the thornless varieties, Chester has large, sweet fruits. It is semi-trailing.

‘Hull’ This variety is a sibling of ‘Black Satin’. It’s more cold-hardy and has sweeter and firmer fruits, which are also large. The plants are semi-trailing and productive.

‘Navaho’ The productive, erect canes bear large crops with excellent flavor over a relatively long season. The berries are relatively small.

HARVEST, STORAGE, AND USE If a blackberry doesn’t stain your fingers purple when you pick it, you’re not going to be tasting it at its best. The flavor improves dramatically in those last couple of days of ripening. Of course, at that point—which is well after it has just turned black—you cannot transport the fruit much farther than from bush to mouth or, at most, to the kitchen, which is why backyard blackberries taste so much better than store-bought ones. For jams, pies, and other cookery, slightly underripe fruit is satisfactory, perhaps even better than dead-ripe fruit.

Blackberries do not keep well, no more than a few days under ideal conditions of cool temperatures and moderately high humidity.

‘Chester’ blackberry

BLUEBERRY

Vaccinium corymbosum (highbush blueberry), *V. angustifolium* (lowbush blueberry), and *V. asheii* (rabbiteye blueberry)

Familiar to everyone and dominating the markets are highbush blueberries. Lowbush blueberries are generally smaller, sweeter, and less aromatic, although the flavor varies from plant to plant. Lowbush blueberries are the ones found in pie fillings and cans. Rabbiteye blueberries are small, often not as highly flavored as the other species, and have a thicker skin that lets them hang well and develop full flavor even under hot conditions. In fact, many blueberry varieties are hybrids whose parentage includes these three, and sometimes other, species.

REGIONS OF BEST ADAPTATION These blueberry species are native to parts of the East Coast and the upper Midwest where the soils are very acidic, very high in humus, infertile, and moist. However, with soil modification and, when necessary, irrigation, some kinds of blueberry can be grown almost everywhere. Rabbiteye blueberries are the most tolerant of hot weather and dry soils, and extend the harvest season.

YIELD 7 pounds per plant for highbush, 15 pounds per plant for rabbiteye, and 5 to 10 pounds per 100 square feet for lowbush

USDA COLD HARDINESS ZONES 4–7 (highbush), 3–7 (lowbush), 7–9 (rabbiteye)

AHS HEAT ZONES 7–1 (highbush), 8–1 (lowbush), 9–2 (rabbiteye)

POLLINATION Partially self-fruitful; cross-pollination increases yield and berry size

LUSCIOUS LANDSCAPE INDEX 1 (plants are beautiful year-round, the fruits are luscious and healthful, no insect or disease problems; does need some pruning, special attention to soil, and netting for birds, unless your birds will share)

PLANT SIZE AND GROWTH HABIT Blueberries grow on shrubs, shrubs that range from only a foot or so high in the case of the aptly named lowbush blueberry to those growing 6 to 8 feet high for the highbush blueberry and to 15 feet high for the rabbiteye. Lowbush blueberry spreads by means of underground stems to form a dense mat of plants. Highbush and rabbiteye blueberries are suckering shrubs, each year sending up some new stems at the base of the clump to replace old ones and keep the bushes vigorous. (One more category of blueberries, which I'm ignoring, is the "half-high" varieties. These are hybrids of highbush and lowbush types, growing—of course—to a height intermediate between the parents. They tolerate colder winters than highbush types, so they're useful for frigid climates where something approaching a highbush is wanted. I'm not enthusiastic about their flavor.)

Lowbush blueberry

SEASONS OF VISUAL INTEREST If blueberry bushes didn't yield such delicious fruit, they'd probably take their place with rhododendrons, azaleas, mountain laurels, and their other kin as strictly landscape plants. Blueberries have something visual to offer year-round. Spring brings clusters of nodding, urn-shaped flowers that are either white or pink. Leaves that follow have a slightly bluish cast and remain healthy-looking and lush right until autumn, when they turn bright crimson, sometimes spattered with yellow. The show is not over even after the leaves fall, because cold weather brings out a red color in the stems.

The spreading habit and low stature of lowbush blueberry make it ideal as a ground cover, perhaps interplanted with some small spring bulbs whose dying foliage will be hidden as the blueberry's leaves unfold. Lingonberry, another ground cover luscious landscape fruit, has glossy evergreen leaves and red berries that create a nice vignette when paired with lowbush blueberry.

Highbush blueberry melds right into a shrub border or can be used as a hedge by itself or underplanted with some low plants. How about lowbush and highbush blueberry together?

Taller-growing rabbiteye bushes could be used just like highbush blueberry bushes or could stand on their own as specimen shrubs.

GROWING TIPS Although wild blueberries often grow in the dappled shade of deciduous woods, you'll harvest more fruits from bushes that you plant in full sunlight.

Soil care for blueberries begins before you even plant them. Check the soil acidity (pH) and mix a generous bucketful of peat moss with the soil of each planting hole. If the pH is not in the blueberry-friendly range of 4.0 to 5.0, add sulfur (a mined, natural mineral). In sandy soils, add three-quarters of a pound of elemental sulfur per 100 square feet for each pH unit the soil is above 4.5. Use three times this amount of sulfur for heavier soils. Pelletized sulfur, which resembles small yellow lentils, is easier to spread and cheaper than sulfur powder, which is an old-fashioned but still widely used mild fungicide. After planting, mulch the ground around the plants 3 inches deep with wood shavings, pine needles, leaves, or other organic materials, then water, as needed, to keep the soil moist. Blueberry bushes have very shallow roots that respond especially well to the soil conditions created beneath mulch.

That mulch will decompose over time, so part of the annual care will be to replenish the mulch as necessary. Every few years, or if the oldest leaves start yellowing, also check the soil acidity and add more sulfur, if necessary. Fertilize lightly with a formulation suitable for acid-loving plants—I use soybean meal at the rate of about 1 pound per hundred square feet, which I apply, along with the mulch and, if needed, sulfur, in autumn after leaves fall. Applied in autumn, the mulch also smothers certain disease spores that might infect plants in the spring.

If your soil is very alkaline, you can still grow blueberries. Cart away soil from planting holes a foot deep and 3 feet across and fill them with a mix of peat moss and sand. You'll have to pay closer attention to fertilization in this essentially nutrient-free growing medium.

Pruning is also part of blueberries' annual care, something to do in late winter after the plants have been in the ground for about six years. A highbush blueberry stem typically remains productive for about six years, so the first step in annual pruning of these plants is to cut away, near ground level or to vigorous low side shoots, stems older than five years (or stems more than an inch thick). After that, head back young, weak stems less than a quarter of an inch thick to strong branches or buds and remove older, twiggy growth. Thin out stems in the center of the bush if they are crowded and shorten or remove stems that droop to the ground. Prune rabbiteye blueberries in a manner similar to how you'd treat highbush blueberries, but less severely because of the rabbiteye's inherent vigor. Prune just enough to keep the center of the bush from becoming too shaded and to keep the plants from growing too tall, selectively cutting the oldest and largest stems to the ground.

The best lowbush blueberry fruits are borne on the youngest stems, especially those growing directly from the underground stems. Prune these plants severely, cutting them completely to the ground every few years. The plants do not bear at all the season following pruning, so if you don't want to miss a year of fruit, divide the planting into halves or thirds and prune a different part of the planting each time.

Birds love blueberries, so much so that they may leave none for you. Netting is the best way to thwart them, and it need not detract from your landscaping. Unobtrusive black plastic netting could be draped over the plants. Gather it in underneath the bushes or the birds will just fly in from below. I prefer to build a walk-in cage. My first cages were temporary, consisting of a metal

conduit and PVC pipe frame to support a net thrown over when the berries were ripe; the white netting made, I thought, a nice backdrop for my perennial flowers. More recently, I've constructed a cage with sides of permanent netting and seasonal netting on top. The nets are supported by vertical locust posts joined at their tops with rebar, which, along with the rustic locust gate, make the whole setup look nice throughout the year.

HIGHBUSH VARIETIES

I recommend planting varieties that ripen at various times during the growing season. By so doing, I eat fresh blueberries from the end of June into September (and pack 54 quarts into the freezer to tide me over the "dry" months). As for flavor, I don't think I ever met a highbush blueberry that didn't taste great!

'Atlantic' The medium-sized blue fruits are large and of good quality, ripening late in the season. The plant is vigorous and productive with branches having a spreading growth habit.

'Berkeley' The light blue fruits are very large, with good flavor. They ripen in midseason. Plants are productive.

'Bluechip' This excellent highbush variety produces fruits of good flavor, size, and color that ripen midseason. The bush is productive and upright.

'Bluecrop' The light blue berries are large, firm, and of good quality. They ripen in midseason, sometimes dropping when fully ripe. The bush is vigorous, productive, and more drought resistant and cold-hardy than are most other varieties.

'Duke' These early-ripening berries have excellent flavor. The bush is upright and bears heavily.

'Earliblue' These highbush fruits are large and ripen early. The plant is vigorous and somewhat upright, with good cold-hardiness.

'Jersey' The fruits ripen a little later in the blueberry season. The berries are on the small side but have outstanding flavor.

'Nelson' This high-yielding bush offers berries with excellent flavor in midseason.

'Wolcott' The fruit of this highbush variety is dark blue and of good quality, ripening early but over a short period. The berries hang in loose clusters; the plants are upright and productive.

Lowbush blueberry in flower

LOWBUSH VARIETIES

Although a few varieties of lowbush blueberries exist, seedlings or unselected clones are what's usually available. They vary some in appearance and fruit, but pretty much all are good in both respects.

RABBITEYE VARIETIES

'Aliceblue' This rabbiteye's fruits are small and relatively flavorful. The plant is tall and spreading. This variety needs cross-pollination to set fruit.

'Beckyblue' Fruits are medium-sized, with good flavor. The plant is tall and spreading. This variety needs cross-pollination.

'Tifblue' The fruits are large and light blue, and ripen late in the season. The bush is vigorous, very productive, and more cold-hardy than are most rabbiteyes.

HARVEST, STORAGE, AND USE One of the best things about having blueberry bushes in your yard is that you get to eat them when they're really ripe—which is *not* what they are when they first turn blue. Commercial blueberries are harvested when they first turn blue. You, however, should wait a few more days and then tickle the clusters so that only the truly ripe fruits drop off. Fruits picked underripe will not improve in flavor. If you don't net to keep birds at bay, no berry is likely to hang around long enough to turn blue and then finish ripening for you to pick.

With cool temperatures and high humidity, harvested blueberries will keep for up to two weeks.

Rabbiteye blueberry blossoms

CHERRY, CORNELIAN

Cornus mas

Not a true cherry but a species of dogwood, cornelian cherry is a good stand-in for a tart cherry. The fruits are cherry-sized, usually fire-engine red, and have a single pit. Some varieties bear yellow fruits. The flavor starts quite tart but mellows if the fruits are allowed to hang longer on the plant or even if harvested and left to sit in a bowl for a day or two. In addition to its tartness, cornelian cherry does have its own unique flavor component, which, though subtle, is not at all like that of tart cherry.

Cornelian cherry

YIELD 30–50 pounds per plant

USDA COLD HARDINESS ZONES 4–8

AHS HEAT ZONES 8–4

POLLINATION Partially self-fertile, so will bear in isolation, but yields more with pollen from another variety or clone

LUSCIOUS LANDSCAPE INDEX 1 (attractive in the landscape for much of the year, bears an abundance of fruit with little or no care, widely adapted, spring frost not a hazard, pest resistant)

REGIONS OF BEST ADAPTATION Cornelian cherry has no special regional limitations; it will grow almost everywhere.

SEASONS OF VISUAL INTEREST Flowers appear on leafless branches very early in the season, well before forsythia and around the first day of spring in my relatively northern (Zone 5) garden. Individual flowers are tiny, but are carried in such profusion that the whole tree appears swathed in a yellow veil, an effect that's all the more striking against the backdrop of a dark wall or evergreen plants. The flowering period lasts a long time, often for weeks, which could be one reason the tree bears so well in spite of inevitable later frosts.

Cornelian cherry's leaves are satiny green in summer, often turning mahogany red in the autumn, although that autumn coloration is not reliable. Some varieties have variegated leaves; occasional leaves of 'Elegantissima' are completely yellow or tinged pink. 'Variegata' has irregular, creamy white leaf margins.

Not to be overlooked is the beauty of the fruits themselves. Usually they're bright red, but the color spectrum among clones actually runs from creamy white to yellow, orange, and fire-engine red, to dark red-violet and almost black. Fruit size and shape also vary to some degree among clones.

Cornelian cherry has some things to offer even in winter. From a distance, the tree has a pleasant, rounded form. Step a bit closer to appreciate the bark, flaking off in muted shades of tan and gray. Get right up to the plant to see the distinctive flower buds, perched like buttons atop short stalks along the stems.

It's no wonder that cornelian cherry is a familiar ornamental plant.

PLANT SIZE AND GROWTH HABIT Cornelian cherry grows to a maximum height of about 25 feet, becoming a large shrub or an oval-headed tree usually branching near ground level. In full sun the stems are mostly upright; in shade they spread wide, as if better to embrace what limited light is available. In poorer or drier soils, the tree will remain much smaller. The tree also can easily be kept small with pruning.

Cornelian cherry in the spring garden

GROWING TIPS Plant this tree carefully, keep weeds at bay at least for the first few seasons, water as needed during the first season and you'll have little else to do for your tree beyond enjoying looking at it and harvesting the fruits. The plant will grow in shade but needs full sun for best fruiting.

Prune the tree if you like. Perhaps it needs a bit of cosmetic shaping. Perhaps you'd like to keep it from growing as large as it's inclined to do. Perhaps, as the tree ages, the interior branches are becoming congested and dank. Go ahead, then, and prune.

VARIETIES

Note that many cornelian cherry trees offered by nurseries are seedlings rather than named varieties. These seedlings are generally satisfactory although do not possess the special characteristics touted (sometimes with some exaggeration) for the named varieties.

'Black Plum' This variety bears very dark red, medium-sized fruits with good fresh flavor somewhat akin to guess what.

'Elegant' The long, bright red, pear-shaped fruits ripen early and are good for fresh eating.

'Flava' This variety bears large yellow fruits.

'Golden Glory' This plant forms is an upright, columnar tree with especially dark green leaves.

'Macrocarpa' This variety is notable for its large fruit.

'Nana' This variety is naturally dwarf.

'Pioneer' The dark red, pear-shaped fruits are up to 1½ inches long and ripen early.

'Red Star' The oval, dark red fruits are 1¼ inches long and ripen late to a sweet-tart flavor.

'Siretski' This vigorous plant bears large, cylindrical, bright red fruits having a sweet-tart flavor.

'Vavilov' The large, oblong fruits have a deep red color and sweet-tart flavor that is good fresh.

'Yellow' Yellow fruits are an inch long with sweet-tart flavor that is good for fresh eating.

HARVEST, STORAGE, AND USE Cornelian cherries ripen from summer through fall, the time varying from clone to clone, with fruits on even a single tree ripening over an extended period. The simplest way to harvest in quantity is to give the branches a gentle shake periodically once the fruit has colored, then collect fallen fruit from a cloth spread on the ground. Let the fruits hang on the tree longer or let them sit in a bowl for a couple of days if you like the flavor more sedate.

Evidence exists that humans have been eating cornelian cherries for about 7,000 years, so you can imagine the many uses that have been found for this fruit besides just popping them fresh into your mouth. Cornelian cherries have been pickled like olives, and are a favored ingredient of Turkish *serbert*. In Ukraine, where the fruit is still very popular, it's made into conserves, fermented into wine, distilled into a liqueur, dried, or juiced, then bottled commercially into soft drinks. In Britain, the fruits were once made into tarts or a thickened, sweet syrup known as *rob de cornis,* which added pizzazz to cider and perry. John Parkinson, the British herbalist of the 17th century, was a fan, stating of cornelian cherries (in *Paradisi in Sole*) that "by reason of the pleasantnesse in them when they are ripe, they are much desired . . . also preferued and eaten, both for rarity and delight."

CHERRY, NANKING

Prunus tomentosa

Nanking cherries are small, averaging about ⅝ of an inch across, and very juicy with a very nice, sprightly, true cherry flavor somewhere on the flavor spectrum between that of the familiar tart cherry and sweet cherry. The fruits are mostly bright red but some bushes bear pink, almost white, fruits. Only seedlings are available, so each plant bears fruits that taste and look a bit different from those on other plants. The fruits begin to ripen just as the harvest from June-bearing strawberries is winding down.

YIELD 15 to 25 pounds per bush

USDA COLD HARDINESS ZONES 3–6

AHS HEAT ZONES 7–1

POLLINATION Cross-pollination

LUSCIOUS LANDSCAPE INDEX 1 (no pruning, no spraying, very tolerant of heat, cold, drought, and birds, beautiful flowers in spring, often bears the year after planting, tasty berries borne so abundantly that you and the birds can freely share, resistant to damage from late-spring frosts)

Nanking cherry

REGIONS OF BEST ADAPTATION Look to its native habitat to get some idea of what Nanking cherry can tolerate. Its origin is in the hills of central Asia where, in the same year, winter temperatures plummet to –50°f and then summer temperatures soar to over 100 degrees. Nanking cherry will grow almost everywhere.

PLANT SIZE AND GROWTH HABIT Nanking cherry is a large, rounded shrub about 10 feet high and wide that is dense with twigs. Depending on the particular seedling, some shrubs will be a bit more upright growing, others a bit more spreading, some a bit larger, others a bit smaller. Soil conditions affect vigor, and in poor soil bushes may reach only 5 feet in height.

SEASONS OF VISUAL INTEREST Nanking cherry offers visual delight in three of the four seasons but the highlight is definitely in early spring. That's when the bushes burst into oodles of blossoms that start out pink in bud then open to white. Blossoming is so profuse as to almost hide the stems, which in young plants tend to shoot straight upward to look like wands of cotton candy when in bloom. Stems branch much more as plants age.

Those blossoms are followed by an equal profusion of cherries, again in such quantity as to almost hide the branches. The shiny red berries put on quite a visual show against the green leaves, whose surface is softened with a covering of fine hairs. The fruit show lasts about a couple of weeks, after which the bush looks more sedate. Visiting Manchuria in 1924, the U.S. Department of Agriculture fruit explorer Dr. George M. Darrow wrote that "in the rougher portions of Manchuria [the Nanking cherry] occurs only on hillsides where the bushes usually are three or four feet high and, in early summer, are red from the abundance of fruit."

Nanking cherry is nothing special to look at in autumn but going into winter the plant has something to offer visually: bark. The bark is lustrous and orange-brown, becoming more engaging with age when occasional warty lenticels dot the smooth surface and paper-thin strips of older bark peel away in vertical curls.

GROWING TIPS Nanking cherries thrive in full sun and well-drained soil. I have, however, seen bushes grow and even bear a few cherries in deep shade – not that I recommend such a condition.

Nanking cherry is among the few fruits that you plant, keep weeds at bay at least for the first year, and then do nothing but come back year after year for harvest. Prune the plant only if you want to give it a certain shape or to keep it smaller. Occasional pruning to keep the interior of the plant open to light and air will keep the bush and its fruits healthier. Occasional, more-severe pruning of older bushes stimulates the production of younger, more-fruitful new shoots. For a drastic rejuvenation, lop the whole bush to the ground; it will quickly grow back and be bearing again.

Branch dieback occasionally occurs on bushes of all ages. This dieback has been attributed to some fungal or bacterial disease. Cut off the afflicted branch if you wish, or just ignore it. The problem rarely kills a whole bush but even if it does, no matter: Just plant a new one. Nanking cherry bushes are inexpensive, and with good conditions grow quickly and fruit at a very early age, often in their second year.

VARIETIES Nanking cherry entered this country toward the end of the 19th century with much fanfare, leaving enthusiasts wondering whether the plant would make its mark more as an ornamental or as a fruiting plant. Breeders began working with this plant (quite extensively in Russia) but interest evidently waned and the few varieties developed are no longer available. Perhaps people enjoy growing plants that present greater challenges. Maybe the plant needed a better common name; it's also been called Manchu cherry, downy cherry, and Chinese bush cherry. Unselected seedlings are all you can get today. I've grown a lot of them and they've all been good.

HARVEST, STORAGE, AND USE Nanking cherry is mostly a fruit for ambulant consumption. I harvest and eat the ones lining my driveway on the way to my mailbox. The fruits also make a refreshing juice. If you're patient, pit them for pies, which some people (not I) do. Fresh, Nanking cherries won't keep well because the stem stays on the bush at harvest, leaving a hole in the fruit that leaks juice. A bowl of Nanking cherries is soon sitting in its own juice.

Nanking cherry in early spring

CHERRY, SWEET

Prunus avium

Sweet cherries are just that. Within that descriptor are many varieties, conveniently divided into so-called Heart (English Gean) and Bigarreau types. Heart types, which include the variety 'Black Tartarian', are heart-shaped with soft and tender flesh. Bigarreaus are the firm-fleshed sweet cherries that end up on market shelves. Within both categories are varieties with dark red skin and others with light yellow skin, often with a red blush. Birds are less attracted to the yellow varieties.

YIELD 300 pounds per full-sized tree, less for dwarfs

USDA COLD HARDINESS ZONES 5–9

AHS HEAT ZONES 8–1

POLLINATION Most need cross-pollination, but there are many pollination incompatibilities, so make sure any two or more that you plant are pollination compatible. The varieties 'Lapins', 'Starkrimson', 'Stella', and 'Sunburst' are self-fruitful. The varieties 'Bing', 'Emperor Francis', 'Lambert', and 'Napoleon' ('Royal Ann') need cross-pollination but can't pollinate each other. The varieties 'Black Giant', 'Hudson', 'Rainier', 'Ursula Rivers' also need cross-pollination but cannot pollinate each other. The same can be said for 'Jubilee', 'Schrecken', 'Van', 'Venus', 'Windsor', and also for the group 'Black Republican' and 'Hedelfingen'. Cherries within each self-incompatible group can be cross-pollinated by a variety within a different self-incompatible group. So 'Bing' and 'Lambert' cannot cross-pollinate each other but 'Bing' and 'Hudson' can. See references (page 177), if needed, for more incompatibilities.

LUSCIOUS LANDSCAPE INDEX 3 (nice blossoms, luscious fruits, and potentially little care except perhaps to keep birds at bay; needs best locations to be easy and, beyond flowering, no special ornamental value)

Sweet cherry tree in flower

REGIONS OF BEST ADAPTATION Sweet cherries are best adapted to areas west of the Rocky Mountains, where there are fewer insect and disease pests. Some of the pests, such as plum curculio, are nonexistent or rare in the West; others, such as brown rot, do not thrive in drier regions. Despite the potential for pests, I have seen sweet cherry trees do well without any special care in the "humid Northeast," so they may be worth a hopeful try in less than ideal locales.

Heat and cold also limit which regions are best for growing sweet cherries. They have a relatively high chilling requirement, so they can't be grown where winter weather is mild, but they can't tolerate winters in the coldest parts of the country. They bloom early, so ideally bear best where late-spring frosts are rare. They do not thrive where summers are long or hot. Besides contributing to disease incidence, wet weather near harvesttime causes ripening fruits to crack.

PLANT SIZE AND GROWTH HABIT A sweet cherry tree can grow to become among the largest of fruit trees, up to about 50 feet high, with an upright growth habit that leads to a pyramidal form. Plan on the limbs of a full-sized sweet cherry tree spreading about 20 feet across. With pruning, the tree can be kept at a more manageable height of around 15 feet, and dwarfing rootstocks, such as 'Colt', 'Gisela 5', and 'Gisela 6', can bring that size down even more.

GROWING TIPS In addition to full sunlight, sweet cherry trees need perfectly drained soil. If the soil

tends to stay wet, either plant the tree somewhere else or haul in dirt to create a wide mound a few feet high on which to plant. Train a young tree to a modified-central-leader or central-leader form.

Young sweet cherry trees have a natural tendency to develop bare stems devoid of side branches. Counteract this by shortening the developing leader in late winter about 12 inches above the point where you want each tier of scaffold limbs, and similarly shorten scaffold limbs for secondary branching. Once mature, the tree requires little pruning because fruits develop both on young wood and on spurs on older wood, and because the potential crop does not respond to fruit thinning, which is one effect of pruning. Bearing can be quite prolific on a tree dwarfed on 'Gisela 5', sometimes too much so and at too young an age. Give these dwarfed trees rich soil and remove some fruits on them when they are young so that quality remains good and a tree does not become a runt from channeling excess energy into fruiting rather than just growing.

Pests can attack even in favored locations. Diseases threaten any tree growing under less than perfect conditions of full sunlight, low humidity, and perfectly drained soil. Keep brown rot, which results in fuzzy, gray fruits, from spreading by picking off and composting any dried-up "mummies" you find during or after harvest. Oriental fruit moth is among the more serious insect pests, making a large hole in fruits or twigs, causing the latter to wilt. Control it with pheromone traps. Keep trees growing vigorously and free of bark damage—from the lawn mower, for example—to make them less attractive to another insect, borers. Painting trunks with white latex paint diluted by half with water reflects the sun's heating rays to lessen winter damage to the bark and creates a landscape look you might enjoy. There's not much you can do about fruit cracking beyond growing a cracking-resistant variety and praying for dry weather as fruit ripens. Cracking occurs when cherry flesh swells as water is absorbed through the skin.

Birds, of course, love cherries. Netting a tree is the only sure way to keep them at bay, something not usually feasible for a large tree. A less effective alternative is to drape a tree with black cotton thread; this seems to bother birds. Do this by enlisting a helper to toss a spool back and forth among the branches while holding on to the free end of the thread as it unravels from the spool. Yellow varieties of cherries are less attractive to birds than are red varieties. Some people plant mulberry trees to draw away birds from cherries, but I wouldn't bank on this plan; you might just attract more birds.

SEASONS OF VISUAL INTEREST Sweet cherries are very flamboyant in bloom, their white flowers clustered along the branches in groups of two to five. But don't expect the show to equal that of a "flowering cherry," the kind commonly planted as an ornamental tree. Those ornamental cherries often have multiple rows of petals, making each flower even more show-stopping (but also infertile, so they don't bear fruit).

Large trees used as specimen plants can carry some show through the season with their heavy limbs and lenticeled bark, shiny when younger. Large sweet cherry trees often have a good shape for climbing.

VARIETIES

'Bing' These dark, mahogany-red Bigarreau type fruits are the ones you mostly see in the markets. The fruits are large and the texture is meaty. The fruit cracks in wet weather and the tree is only moderately cold-hardy.

'Black Tartarian' The fruits are medium-sized, dark red, and heart-shaped (and it's a Heart type cherry) with flesh that is tender, very juicy, and sweet. The tree is productive and ripens its fruits early in the season.

'Compact Stella' This sweet cherry has medium-large fruits that are dark red and firm, but with only fair flavor. The tree is semidwarf and moderately hardy. This variety is reliably productive and self-fertile.

'Emperor Francis' Delicious yellow fruits resist cracking. The tree is productive and cold-hardy. A Bigarreau type.

'Hedelfingen' This old European variety has black fruits that are medium to large, firm, and of high quality. It is more crack resistant than are most varieties. A Bigareau type.

'Kristin' The large sweet fruit has a tender, dark red skin and a firm red flesh. The fruit is moderately resistant to cracking when rainy weather accompanies harvest. The tree is cold-hardy.

'Sodus' Large sweet fruits have light red skin and a firm yellow flesh. The fruits resist cracking.

'Stella' These dark-fleshed fruits are moderately firm and susceptible to cracking. 'Stella' is self-fruitful and pollinates other varieties.

'Sweet Ann' This yellow sweet cherry has a red blush and a firm texture, and resists cracking. The flavor is excellent. The tree is cold-hardy and somewhat resistant to spring frost damage.

HARVEST, STORAGE, AND USE Pick cherries when they are fully colored, sweet, and part easily from the tree where the fruit stalk attaches to the branch. Rushing the harvest when rainy weather is predicted might avoid cracking but won't give you the best-quality fruits. Kept cool, ripe cherries store up to two weeks under perfect conditions of temperatures near freezing and high humidity. Maraschino cherries, by the way, are made not from sweet cherries but from sour cherries.

‘Sweet Heart’ cherries

CHERRY, TART

Prunus cerasus

Tart cherries (once called, less appealingly, sour cherries) are, of course, tart, but all tart cherries are not equal. Amarelles, which include the familiar varieties 'Early Richmond' and 'Montmorency', make a light-colored juice and the fruits are flattened on both ends. Morello tart cherries, which include the varieties 'English Morello' and 'North Star', are smaller trees bearing spherical, dark, very flavorful fruits that make dark-colored juice. Marasca cherry is a Morello tart cherry that is small and makes a red juice.

YIELD 100 pounds per tree

USDA COLD HARDINESS ZONES 4–8

AHS HEAT ZONES 8–1

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 2 (relatively easy to grow and widely adaptable; needs regular pruning and, although pretty when blossoming in spring, has not that much to offer visually the rest of the year)

Tart cherry

REGIONS OF BEST ADAPTATION Tart cherries are much more adaptable than their sweet cousins,

tolerating colder winters and more-humid growing conditions. As such, I would recommend them for almost everywhere except where winters are too, too cold or too, too warm.

PLANT SIZE AND GROWTH HABIT A mature tart cherry tree has a spreading growth habit and rarely reaches more than fifteen feet tall.

SEASONS OF VISUAL INTEREST Bloom time is when a tart cherry tree is at its prettiest, with white blooms appearing along one-year-old stems as well as from spurs on older parts of the tree. Something could be said for the nice visual contrast created by the red fruits ripening among the green leaves but, in all honesty, a tart cherry tree has little to offer visually in the landscape after bloom time.

GROWING TIPS With abundant sunlight and a reasonably well-drained soil, a tart cherry tree should perform well with little care.

Tart cherry trees need careful pruning both for training the young plants and for maintaining good production on mature ones. On the young plant, remove stems that will be out of place as the tree ages, choosing as stems that will become the main scaffold limbs those that are spaced about a 6 inches apart vertically along the trunk and not arising directly over or across from another scaffold limb-to-be. Do not shorten any scaffold limb-to-be—as practiced on many trees to promote branching—because this can stunt tart cherry trees.

Flowers are borne on one-year-old stems as well as on spurs on older stems. On the bearing tree, maintain a good balance between new growth, which is needed for the following years' fruits, and the present year's flowering by pruning enough to encourage about a foot of new growth annually. Spurs remain productive only three to five years, so pruning is also needed to coax new growth and its eventual new spurs.

Pests that affect sweet cherries and related fruits also prey on tart cherries, but less so and usually they can be ignored. Birds are an exception; they are very fond of tart cherries. Short of a walk-in cage or a net draped over a tree, birds may be dissuaded—or not—by black thread tossed among the branches; fake hawks, owls, and snakes; shiny reflectors; 'Scare-eye' balloons, or a number of other devices.

VARIETIES

'English Morello' This naturally small tree has drooping branches. The fruit is late ripening, medium-sized, dark red, and crack resistant. This tree is cold-hardy but susceptible to cherry leaf spot fungus and not very productive. A Morello type.

'Meteor' This dwarf tree boasts large, bright red fruits. It is very cold-hardy and widely adapted. An Amarelle type.

'Montmorency' The standard pie cherry, its bright red fruits have a rich, tangy flavor. The firm fruits resist cracking. This Amarelle type makes a widely adaptable, medium to large tree.

'North Star' This naturally small tree bears light red fruits that resist cracking and hang for a

long time after they are ripe. The plant is very cold-hardy and somewhat resistant to cherry leaf spot and brown rot. It is a widely adapted Morello type.

HARVEST, STORAGE, AND USE Tart cherries are usually destined for pie, perhaps juice, but many people enjoy them fresh, especially if the fruits have fully ripened on the tree. Eat the fruits or make those pies quickly because the fresh fruits keep only a few days under the best possible storage conditions.

As to maraschino cherries, *maraschino* was the name given to a famous liqueur made in Italy and nearby from the kernel of the Marasca cherry. That cherry, which is very finicky about its growing conditions, bears a bitter, dryish fruit. Maraschino cherries, as sold today, are made from cherries that have been bleached and then soaked in a sugary solution to which red food dye and almond extract have been added. The cherry is a mere vehicle for all this sweetening and flavoring, and Marasca cherries, which give the name *maraschino,* are rarely used today for this confection.

‘North Star’ tart cherry

CURRANT, CLOVE

Ribes odoratum

Clove currant is a true currant, with blue-black fruits that are large for currants, ⅜ to ½ inch or more across, and shiny. The flavor is strong, fruity, and somewhat resinous (all in a good sense) with a good balance, when perfectly ripe, of sweetness and tartness.

YIELD 4 to 8 pounds

USDA COLD HARDINESS ZONES 4–8 (possibly more in either direction)

AHS HEAT ZONES 9–3

POLLINATION Probably yields better with cross-pollination

LUSCIOUS LANDSCAPE INDEX 1 (no maintenance except for pruning, if desired; pest resistant; some fall color; attractive and very fragrant flowers; tasty fruits)

SEASONS OF VISUAL INTEREST Clove currant is at its ornamental best in bloom in spring. The flowers are yellow, red-tinged trumpets, 2 or 3 inches long, that dangle in profusion from the branches like charms on a bracelet. The visual show is eclipsed as the flowers play on another of the senses, that of smell, with the heavy fragrance of clove and vanilla they exude. The slightly bluish leaves of this insect- and disease-resistant plant stay healthy all summer long and then turn plum-purple in autumn.

Clove currant in flower

REGIONS OF BEST ADAPTATION If you've ever lived in the Midwest, you know how brutal the summer and winter weather can be. Clove currant is native to the Midwest, from Texas to Minnesota, which tells you something about what this plant can tolerate. It is resistant to just about every ill that normally befalls plants and will grow pretty much everywhere.

PLANT SIZE AND GROWTH HABIT Clove currant grows as a shrub 5 to 6 feet high and wide. The branches arch, often touching the ground, and new sprouts are sent up from the spreading roots, sometimes 2 feet or more from the base of the plant. Unpruned, the shrub is unkempt—not a bad thing in the right informal setting, such as blanketing a hillside too steep to mow (as is often done with forsythia). With pruning, the shrub can be kept neater and to itself, even trained as a miniature tree. Closely related *Ribes aureum* grows more upright and is less spreading; however, it produces much fewer and smaller fruits.

VARIETIES A few varieties of clove currant existed in the past but they are mostly lost. One variety, if it can be called such, that is still around is 'Crandall'. Found in the wild in Kansas in 1888, it reputedly bore tasty fruits up to ¾ inch in diameter. Unfortunately, many plants sold as 'Crandall' were seedlings, so 'Crandall' plants were (are) somewhat variable.

HARVEST, STORAGE, AND USE Clove currants ripen from mid- to late summer and do so unevenly, so if you're going to eat them fresh, pick the fruits individually and go over the plants many times. Fruits picked shy of peak ripeness are fine for cooking—I imagine that clove currant would make a delectable pie or jam—and could be picked in greater quantity at once.

Clove currant in the landscape

GROWING TIPS Give clove currant full sunlight and reasonably good soil, and water and weed, as needed, in the first season, and there's little else you'll have to do from then on besides harvesting the fruit. Clove currant is very resistant to insects, diseases, deer, cold, heat, and drought. The plants begin growth very early in the season, so plant them in autumn.

Regular pruning is not absolutely necessary unless you want to coax maximum production from your plants. Flowers are borne on stems that are one year old and on spurs on older wood. Prune clove currant lightly, mostly removing branches that are trailing on the ground or broken, occasionally cutting back older stems to induce growth of or make way for younger ones. If the whole bush seems to be getting old and tired, just lop everything to the ground. This will sacrifice the crop for the following season, but after that, there should once again be a good load of fruit on vigorous younger wood.

Clove currant in fruit

CURRANT, RED, WHITE, OR PINK

Varieties are mostly a mix of *Ribes petraeum*, *R. rubrum*, and *R. sativum*

All three of these currants, which are just three colors of the same fruit, are like translucent jewels. When the delicate spheres are backlit by the sun, they glow with color and you can see the seeds floating within. The flavor is sprightly and refreshing, somewhat sweet in some varieties when they are allowed to ripen thoroughly.

YIELD 3 to 10 pounds

USDA COLD HARDINESS ZONES 3–7

AHS HEAT ZONES 7–1

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 2 (beautiful in flower, beautiful in fruit, long-lasting, low-care, very tasty fruits, pruning not necessary; offers little beauty in winter and part of summer)

REGIONS OF BEST ADAPTATION Although they are plants that come from and thrive where summers are cool, red currants (and the whites and pinks) will grow in regions with warmer summers if given some cooling shade and extra attention is paid to soil.

PLANT SIZE AND GROWTH HABIT These currants grow naturally as multistemmed shrubs averaging about 4 feet high and wide. For something more spectacular, red currant is easily trained to various shapes of espalier.

Red currant (*Ribes sativum*)

SEASONS OF VISUAL INTEREST Hearing that currant blossoms are pale green and small, you wouldn't think they'd be much to look at. They are! They dangle in long clusters from the stems looking as frilly and decorative as fine lace. The flowers are followed by the small berries that dangle along fruit stems (*strigs*) like fine jewelry. Currant is a bush to plant within a flower bed, and, because some shade does them no harm, it can even share that bed with a small tree. A row of currant bushes also makes a nice hedge, especially if plants are spaced just far enough apart that each stands as an individual flanked by its neighbors. Horizontal arms of an espaliered currant highlight the strigs of flowers, then the fruits, by letting them dangle freely without distraction—nice flat against a wall, decorating a fence, or creating a living fence.

GROWING TIPS Currants leaf out very early in spring, so it's best to plant in autumn or to start with potted plants (or, if you must, plant *very* early in spring). They are not finicky about their soil but do like it cool, so maintain a mulch of some organic material beneath them. Where summers are hot, consider siting them near a north wall, on a north-facing slope, or in partial shade.

Currants tolerate neglect. Still, some pruning improves production and, perhaps, appearance (depending on what look you like). The bushes bear best on two- and three-year-old wood, so rigorous pruning of a bush involves cutting away any stems more than three years old. Many new suckers arise each year near the base of a plant. To prevent overcrowding, reduce these youngest stems to the best six or so. The pruned bush, then, is left with six each of one-, two-, and three-

year-old stems, and is continually renewed as each year you remove oldest stems and younger ones take their place. If a bush gets out of hand through neglect, rejuvenate it with some selective pruning along the above lines, or just lop the whole plant to the ground and start again with the new shoots that sprout. The latter method does sacrifice the following year's crop.

Currant is among the easiest plants to make into an espalier. Decorating the fence around my vegetable garden are currants that I trained to the form of a T. I developed this form by first removing all but a single stem (the younger the plant when this is started, the better). Once this stem reached the top of my 3-foot-high fence, I pruned back the top a couple of inches, then tied the two uppermost shoots that sprouted to a wire running along the top of the fence, training the shoots in opposite directions. Because upright-pointing growth is more vigorous than horizontal growth, I maintained good growth on the developing arms by letting each whole arm or at least its far half angle upward. Once arms reached full length, I tied them down completely to a horizontal position, which slowed extension growth and encouraged more-fruitful side shoots.

Only two simple cuts are needed to maintain my currant espalier, keeping the form neat while encouraging abundant fruit production. I make the first cut in late spring, just as the berries show their very first hint of color, shortening every shoot growing off those horizontal arms to about 5 inches in length. I prune again in late winter, this time shortening all those 5-inch-long stems to 1 inch in length. I also keep an eye out for and remove any sprouts trying to grow from the base of the plant and any other branches that sprout along the trunk.

Action is not usually necessary against the few insects and diseases that occasionally attack currants. A frequent concern is some reddish and puckery leaves that sometimes develop in spring. Aphids are the culprit; the problem (the aphids, not the leaf damage) usually evanesces by summer without intervention.

‘Pink Champagne’ currants

VARIETIES

‘Albatross’ This white currant variety offers moderate yields of yellow fruits with excellent flavor.

‘Blanka’ High-yielding and somewhat disease–resistant, this plant sports fruit that is large and late-ripening and hangs on long strigs.

‘Champagne’ (‘Couleur de Chair’ or ‘Pink Champagne’) This very old variety yields pale red fruits with delectable flavor, although the fruits do not hang prettily for as long as some of the red varieties.

‘Jonkheer van Tets’ The fruits of this leading Dutch variety, which is very productive and erect growing, are tender, large, and easy to pick but very tart—too tart for me.

‘Primus’ These white currants are borne on an upright, vigorous bush, similar to ‘Blanka’ but with reddish young shoots and reddish leaves. The plant yields well and the creamy white berries are small but have excellent fresh flavor (among my “currant” favorites).

‘Red Lake’ This variety is one of the most cold-hardy red currants. The bush is very productive and erect, yielding large fruits borne on long strigs. The fruit flavor is good.

‘White Versailles’ The bush is upright and the fruits are large and borne on long strigs, but they’re too tart for me.

‘Wilder’ This variety is disease resistant and vigorous. The fruit is large, with average flavor.

HARVEST, STORAGE, AND USE Currants, especially red currants, look so festive hanging ripe on the bushes that I find it difficult to bring myself to pick them. All the better, because the longer they hang, the sweeter they become. If you pull at the berries on a strig with just the right force, you can get them to pop off into your hand while the strig remains attached to the stem. Another quick way to harvest is to slide a strig between the tines of a fork, then pull the fork along catching the ripe berries into a bowl as they pop off the strig. Harvest from those strigs either out in the garden or pull them off and strip them in the comfort of your kitchen.

Besides fresh eating, currants are cooked in various ways. They make a beautiful, clear jelly, and have also been used in sauces, pies, even wines. But not "dried currants," which are actually dried fruits of 'Black Corinth' grapes.

Red currant espalier

GUMI

Elaeagnus multiflora

Gumi is sometimes called cherry elaeagnus, a fitting name for this fruit that is a ½ inch to 1 inch long, bright cherry red, and flecked with silver. The fruits are juicy with a very refreshing, tart flavor that subsides to some degree at the peak of ripeness.

YIELD 10 pounds

USDA COLD HARDINESS ZONES 4–9

AHS HEAT ZONES 8–2

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (pretty bush, fragrant flowers, ornamental and tasty fruits, no maintenance; fruits aren't tasty enough to warrant a higher rating)

REGIONS OF BEST ADAPTATION Gumi is widely adapted.

PLANT SIZE AND GROWTH HABIT Gumi is a somewhat spiny, suckering shrub reaching about 8 feet high and wide. Suckers are thrown up from the base of the plant.

SEASONS OF VISUAL INTEREST Its flowers are not individually notable, but when the bush is in bloom, they appear *en masse* as a pale yellow, fragrant haze. The leaves are green on their upper sides and hoary below, so that the plant shimmers in the breeze. The brightly colored fruits are quite ornamental as they dangle on long stems from the undersides of the branches. Gumi also makes a nice hedge.

Gumi in the landscape

GROWING TIPS Give gumi full sun or just a bit of shade and any soil, except one that stays wet, and the plant will thrive. It tolerates drought and compensates for low fertility with a symbiotic microorganism at its roots that takes nitrogen from the air and converts it to a form that plants can use. Gumi tolerates dry, salty, and alkaline soils, as well as extreme heat. No need to worry about pruning or pest problems, either.

VARIETIES Gumi fruits have been enjoyed in parts of Asia and some varieties have been brought back from that part of the world and offered by nurseries here.

HARVEST, STORAGE, AND USE

Gumis ripen in midsummer. Wait as long as possible to harvest, but watch out because the fruits tend to drop when fully ripe. The flavor of the fruits improves dramatically during the final days (hours?) of ripening, when astringency decreases and sugar increases.

GRAPES

Vitis vinifera (European wine grape), *V. labrusca* (fox grape), *V. rotundifolia* (muscadine grape)

From a gustatory standpoint, let's consider the three basic kinds of grapes. (There are some strictly ornamental grapes also.) First is the European wine grape, typically mild and very sweet with a meaty flesh and tender skin; 'Thompson Seedless' is a characteristic European wine grape.

Next is the fox grape, a native of eastern America, of which 'Concord' is characteristic. These grapes typically have a tough skin and a jelly-like flesh that is very sweet with a unique ("foxy") flavor, especially just beneath the skin. European wine grapes and American grapes have been extensively hybridized to produce excellent varieties with characteristics of each of their parents. Many so-called American grapes, including 'Concord', have at least some European wine grape in them.

The third basic type of grape is the muscadine (sometimes called scuppernong, which is actually the name of one old muscadine variety). These fruits can be up to 1 inch in diameter and have a tough skin, hard seeds, and a distinctive musky, fruity flavor. Muscadines are also native to North America, in the Southeast.

A poolside grape arbor

YIELD 10 to 30 pounds per vine

USDA COLD HARDINESS ZONES 7–10 for European wine grape, although a few varieties tolerate colder temperatures; Zone 3–7 for fox grapes, Zone 7–9 for muscadine grapes; hardiness of European-American hybrids varies but generally it's Zones 5–10.

AHS HEAT ZONES Variable, depending on species and variety

POLLINATION European wine grapes and fox grapes are generally self-fruitful. Most muscadine grapes require cross-pollination from a separate (nonfruiting) male. Some muscadines are self-fruitful because they have both male and female flowers; these varieties can also pollinate strictly female varieties.

LUSCIOUS LANDSCAPE INDEX 2 (delicious fruits, decorative vines; annual pruning is required as well as frequent attention to pests)

REGIONS OF BEST ADAPTATION European wine grapes thrive in western states where summers are hot and dry. Muscadine grapes thrive in the Southeast but can also be successfully grown in areas of the West where summers are hot enough to ripen the fruits. Fox grapes are widely adapted. Adaptation of European-American hybrids varies depending on the degree of influence of each parent.

PLANT SIZE AND GROWTH HABIT Grapes are lusty vines that both look and perform best when trained rather deliberately on some type of support. They cling to their support by means of tendrils, which wrap around slender objects such as twigs and wires.

SEASONS OF VISUAL INTEREST A grapevine can provide visual interest year-round, but only if grown in such a way that makes the most of its ornamental qualities. As a vine, it's a natural for clambering over arbors. In winter, the trunk can twist picturesquely to this outdoor "roof," then fan out with bare stems that project shadowy traces on the ground below without blocking welcome sunlight. Come summer, grape leaves provide shade below from the hot sun while creating an attractive lime green "ceiling," each leaf luminescent as sunlight filters through it. I suppose that the bunches of grapes dangling from this ceiling could be considered as adding to the show, but I have to admit that my view is skewed by knowing how good they taste. Leaves of muscadine grapes turn a nice yellow in autumn.

GROWING TIPS Grapes do best and yield the best-tasting fruits in full sunlight and a well-drained soil whose pH is near neutral. Muscadines tolerate wet and/or acidic soils. For good taste and good health (for the vine), the plants also need to be trained in such a way that the canes are all exposed to maximum sunlight and then pruned every year. What luck! An arbor fills the bill as a structure for giving grapes this good exposure.

Plant a vine at one of the support posts for the arbor, then train a single stem straight upward. The post is likely too thick for the tendrils, so give that stem twine or a temporary bamboo stake on which to grab and climb. Cut away any other stems that grow. When the upwardly mobile stem, which now can be called a trunk, reaches the top of the arbor, direct it across using twine to keep it in place. Depending on the size of the arbor, allow one or more stems to fan out at this point. Each stem traveling across the arbor roof will become a permanent arm, called a cordon, off which will

grow fruiting canes.

Once the vine is up and on top of the arbor, the goals of pruning are to keep it from becoming a tangled mess, to keep fruit production near the cordon(s), and to prevent overproduction. Prune each year first by shortening all side branches growing off the cordon(s) to about 1½ feet in length and then by cutting away completely enough side branches so that none remain closer than a foot apart. Periodically, over the years, cut back some side branches to only a bud or two to stimulate young growth originating near a cordon. Grapes are borne on current-season shoots that grow from buds of side branches that grew the previous year; that last cutting back keeps young side branches originating near the cordon(s).

Do all pruning in late winter or early spring. Yes, the vines will bleed sap after pruning but don't worry: It does them no harm.

Another pretty way of growing grapes is along a split-rail fence. In this case, train a single trunk to the top of the fence and let side branches grow off in either direction, either two along the top rail, or two along the top rail and two along the bottom rail. In this case, the permanent part of the vine is the trunk. The side branches, when they are a year old, yield fruiting shoots and then are cut back the following year. Leave each year-old side branch 6 to 10 feet long and when you cut it back the winter after it has borne fruit-bearing shoots, leave a couple of buds remaining. Those buds offer a convenient place of origin for new side branches, two or four of which will remain after the following year's pruning to bear fruit.

Summing up what's left after late-winter pruning: two or four long side branches that are one year old; and two or four stems, whose age doesn't matter, that were shortened to only a couple of buds in length. Fruits are borne each year on new shoots growing from buds on the long side branches.

A few insects and diseases threaten grapes, but a good site, pruning, and choice of appropriate varieties will go a long way to limiting such problems. One thing I do to further limit pest problems, as well as to keep away the birds and the bees, is to individually bag bunches. (Bagging is not appropriate for muscadine grapes.) Though this sounds tedious, bagging, say, 100 bunches doesn't take long, and 100 perfect bunches of grapes is a lot of grapes. I use white, waxed bakery bags, slitting their sides so that I can slide a bag up around the stem on either side of a bunch, and then fold over the top of the bag on itself and hold it with a staple on either side. The bags hanging from the underside of the arbor—the bakery bags that I had purchased have the word "wholesomefreshdel1c1ous" pre-printed on them—lend some humor to the whole scene.

EUROPEAN WINE GRAPE VARIETIES

Being as poor a winemaker as I am a cooker of fruits, the following varieties are recommended for fresh eating—not that they might not make a good wine.

'Flame Seedless' This grape has small, seedless red fruits with a crisp texture and excellent flavor. The fruits, carried in long, loose clusters, are good fresh and for raisins. The vines are very vigorous and productive.

'Muscat Hamburg' An old variety with excellent flavor. The black berries are seeded.

'Perlette' This seedless grape has a crisp flesh, a mild flavor, and a green skin. The fruits are small and ripen early, about a month before those of 'Thompson Seedless'.

'Thompson Seedless' The grapes have a neutral, very sweet flavor and ripen in large bunches.

When you prune, leave fewer but longer canes. ‘Thompson Seedless’ does best in hot regions of the West.

A grape arbor provides food and shade.

FOX GRAPE AND HYBRID VARIETIES

Again, these are recommended for fresh eating, though they might make a good wine.

‘Alden’ This excellent, dark blue variety has meaty flesh and a mild flavor with little or no foxiness. Each berry is large and seeded.

‘Bluebell’ Similar to the familiar blue, seeded ‘Concord’, this one’s much more cold-hardy, it ripens a few weeks earlier, and it’s a tad sweeter.

‘Delaware’ This red grape is cold-hardy and somewhat disease resistant. The fruit ripens early with a sweet, spicy flavor. The berries are small and seeded.

‘Edelweiss’ This white, seeded grape is very vigorous, very cold-hardy, and somewhat disease resistant. The flavor is delicious—sweet and very foxy.

‘Kay Gray’ This seeded, white grape is borne on a moderately vigorous, disease resistant, and very cold-hardy vine. The flavor is somewhat foxy.

‘Lakemont’ These grapes are medium-small and seedless with yellowish green skins. The flavor is sweet and just mildly foxy. The vine is productive and moderately hardy (more so than its

sibling 'Interlaken Seedless' but less so than its sibling 'Himrod', both of which have flavor similar to that of 'Lakemont').

'New York Muscat' These reddish blue, seeded grapes have a muscat flavor and the vines are moderately hardy and moderately productive.

'Price' These medium-sized, seeded, blue grapes are sweet and have a tender skin. The vines are hardy, productive, and disease resistant.

'Reliance' The pink berries having a tender skin and a mild foxy flavor. The fruit stores well. Reliance is cold-hardy and tolerant to disease.

'Swenson Red' A cold-hardy, fruity, seeded, red grape with excellent flavor and a somewhat crunchy texture.

'Vanessa' This seedless red grape has a crisp flesh and a mild but delicious sweet flavor. The vine is moderately cold-hardy.

MUSCADINE GRAPE VARIETIES

Again, these varieties are recommended for fresh eating, although they might make a good wine.

'Black Fry' This female variety ripens uniformly, early to midseason, and is very productive and disease resistant. The fruits are large, the bunches are large, and the quality is excellent.

'Cowart' Very large black fruits are of very good quality. They ripen early and in large clusters. The vine is vigorous, productive, disease resistant, and self-fertile.

'Noble' This variety yields medium-sized, black fruits of good quality that ripen early to midseason. The vine is moderately vigorous and disease resistant, and very productive.

'Scuppernong' This old female variety has a relatively thin skin and sweet flesh with an excellent, distinctive flavor. The berries ripen early in mediumsized clusters.

'Summit' Another female variety, 'Summit' bears large clusters of large bronze fruits with thin skins. The vines are vigorous, productive, and disease resistant.

'Supreme' This female variety bears large clusters of large black sweet fruits. The vines are very vigorous, very productive, and disease resistant.

'Sweet Jenny' Large clusters of very large, bronze sweet fruits ripen early to midseason. The female vines are vigorous, productive, and disease resistant.

HARVEST, STORAGE, AND USE Grapes that have fully ripened on the vine take on a different and much more delectable flavor than those that have just colored and turned a little sweet. Protecting them in bags is the surest way to let them reach this stage without threats from insects, diseases, or the birds and the bees. I harvest a bunch of grapes when the stalk holding it to the stem snaps off cleanly and easily. All bunches on a single vine do not ripen at the same time.

Muscadine grape harvest is a bit different. Individual berries do not ripen all at once even in a single bunch, and ripe berries tend to drop. One way to harvest, then, is to spread a dropcloth on the ground to catch those ripe, falling berries, then go out every day to gather them up. The berries keep well under refrigeration.

In addition to fresh eating, grapes make jelly, juice, raisins, and, of course, wine. Generally, European wine grapes and muscadines are used for wine, fox grapes are used for juice, and

European wine grapes are used for raisins. Grape leaves also provide a nice wrapping for rice and other foods, as in the classic Greek *dolmathes*. Leaves of European wine grapes or one of their hybrids are best for this purpose.

‘Cabernet Sauvignon’ grapes

HACKBERRY

Celtis occidentalis, *C. autralis*, *C. laevigata*, *C. reticulata*

Hackberry is admittedly not the most delectable of fruits, but I still recommend it here because of the plant's other qualities. Actually, the fruits are delectable, the problem being that there's so little to eat. Each fruit is about ⅜ inch across but is mostly a round, hard seed, very hard, hard enough to crack your tooth. The thin layer of flesh around the seed is sweet like a date, which is why the tree is also called honeyberry or sugarberry. Or, in the case of *Celtis australis*, lote tree, because a mere taste of these fruits, in the legend of Odysseus, made one forget home and friends, leaving a desire to do nothing more than stay put and continue eating. The fruits ripen in autumn to a dark purple, reddish in the case of *C. reticulata*.

YIELD Unknown

USDA COLD HARDINESS ZONES 2–9 (*Celtis occidentalis*); 7–9 (*C. australis*); 5–11 (*C. laevigata*); 4–10 (*C. reticulata*)

AHS HEAT ZONES 9–1 (*Celtis occidentalis*); 8–6 (*C. australis*); 9–3 (*C. laevigata*); 9–1 (*C. reticulata*)

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (ornamental form, ornamental bark, occasional autumn leaf color, easy and fast growing; nothing flamboyant, including the fruit)

Ripening hackberry fruits

PLANT SIZE AND GROWTH HABIT Three of the hackberry species grow into large trees; the form of all four is one of their main ornamental attributes. Largest is *C. occidentalis,* at 40 to 80 feet tall by 40 to 50 feet wide. *C. reticulata* grows only 30 feet tall. The large trees, especially *C. occidentalis,* exhibit a vase-shaped form of ascending, arching branches that create outdoor "cathedrals" similar to those created by American elms (a relative) that once lined the sides of many streets and avenues. *C. australis* and *C. laevigata* have more-rounded and spreading crowns. *C. reticulata* branches grow in a twisted and contorted manner when the trees are young, the branches spreading wide and becoming graceful only with age.

HARVEST, STORAGE, AND USE Hackberry fruits ripen in late summer and autumn and often hang on the branches for several weeks. There's not much else you can do with the fruits except pick them off and nibble at them, along with birds and other wildlife. I've read reports of the fruit being made into wine and sold in markets in the Balkans.

REGIONS OF BEST ADAPTATION Hackberries are widely adapted as far as soil and climate, with no serious pest problems anywhere. *C. australis* and *C. laevigata* are less tolerant of very alkaline soils than are the other two species.

Hackberry foliage

SEASONS OF VISUAL INTEREST Aside from their uplifting form, the main visual attraction of hackberry trees—and my favorite thing about them—is their bark, which is pure gray and punctuated by corky ridges. The bark doesn't scream for attention, but stop and look at it, especially on a wintry day when the sun hangs low in the sky, and enjoy the contrasting gray-and-black pattern that recalls crisp achromatic photographs of the lunar landscape.

Hackberries' leaves offer a bit of autumn color, turning soft yellow in the fall. The best autumn color is from *C. laevigata* and that's at its best when it's grown in colder portions, Zones 5–7, of its regions of adaptability.

GROWING TIPS With just a few caveats, hackberries are truly no-care trees. They tolerate a wide variety of climates and soils, as well as wind, drought, pollutants, and the general grime of city air. And they grow fast.

Young trees benefit from some pruning to avoid multiple leaders, which can cause bark inclusion and weak crotches. Cut back or prune away any shoots competing with the leader while a tree is young. The trees tend to look awkward when young, but they'll come around with time. Hackberries have shallow root systems, so expect some surface roots that might interfere with lawngrass or paving when the trees are planted in soils with a high water table. An exception is *C. reticulata,* which has deep roots.

A few pests bother hackberry, but the damage is mostly cosmetic. Branches arising in a tight

cluster are symptoms of witches' broom, which you can cut away or, if you like it, leave alone. (Some very pretty dwarf trees are propagated from witches' brooms found in their canopy.) Avoid injuring the bark and, when possible, pruning of bigger limbs—large wounds don't heal well on hackberries.

VARIETIES

No varieties of hackberry have been selected or developed for their fruits, but who knows, perhaps someday there will be hackberry varieties whose fruits have more than that thin layer of sweet flesh. The following are varieties selected for their ornamental qualities.

'All Seasons' A variety of *C. laevigata,* the form is more uniform than that of the species. The bark lacks the corky ridges that I find so attractive.

'Chicagoland' This *C. occidentalis* variety has an especially upright from.

'Prairie Pride' Also a *C. occidentalis* variety, this one has a more oval branch canopy and lustrous, dark green leaves. It bears few fruits, though.

HUCKLEBERRY

Gaylussacia baccata

Huckleberries look and taste much like blueberries, to which they are related. The most obvious difference is the pleasant crunch of the small seeds you experience when eating huckleberries; blueberry seeds are hardly noticeable. Huckleberry fruits also are usually darker than blueberries and lack that five-pointed calyx "star" opposite the stem end. Many blueberry species are commonly called huckleberry.

YIELD Unknown

USDA COLD HARDINESS ZONES 3–8

AHS HEAT ZONES 7–1

POLLINATION Probably partially self-fruitful; cross-pollination results in larger and more berries

LUSCIOUS LANDSCAPE INDEX 1 (pretty plant, pretty flowers, no maintenance, good-tasting fruits)

Ripening huckleberry fruits

REGIONS OF BEST ADAPTATION Huckleberries have no limitations except for the need for special soil. Existing soil can be modified accordingly if needed. The plants will grow and bear some fruit in dappled shade, as they do in the wild.

PLANT SIZE AND GROWTH HABIT Huckleberries are low bushes growing a foot and a half to 3 feet high and wide. They have a loose, open growth habit in the shade.

GROWING TIPS Although often growing in the wild in partial or deep shade, huckleberry probably fruits best—with adequate water—in full sun.

Huckleberry, like other heath family plants, requires a very acidic soil that's rich in organic matter and low in fertility. Test the soil before planting, and if the pH is above 5.0, add sulfur. Pelletized sulfur is dust-free and less expensive than the powdered sulfur sold as a natural fungicide. In sandy soils, add ¾ of a pound of sulfur per 100 square feet for each pH unit the soil is above 5. Use three times this amount of sulfur for heavier soils. Also dig peat moss into the soil at each planting hole. After planting, mulch the ground with about 2 inches of some organic material such as leaves, pine needles, or straw. And water, as needed, especially during the first season to get the plants established.

Maintenance consists of replenishing mulch as necessary, fertilizing, and maintaining acidity. Fertilize only if leaves look pale and growth is poor; I recommend soybean meal or cottonseed meal at 1 pound per 100 square feet once a year. Check the soil acidity every few years or, if the soil pH was initially near 7.0 or higher, sprinkle more sulfur on the ground every few years. No pruning is necessary.

SEASONS OF VISUAL INTEREST Huckleberries blossom in spring, bearing small, reddish flowers that dangle from the stems like upside-down urns. The leaves usually retain a healthy look all summer and then turn crimson before dropping in autumn.

With its loose, open growth habit in shade, huckleberries are at their best planted in colonies. Put a ground cover, such as lowbush blueberries, at their feet and medium to large trees overhead to create dappled shade and you have a setting that echoes huckleberry's and blueberry's natural habitat.

VARIETIES No varieties exist for this wild, rarely cultivated fruit.

HARVEST, STORAGE, AND USE Pick huckleberries when they are fully colored and drop readily into your hand when tickled.

Huckleberry fall color

JUJUBE

Ziziphus jujuba

Jujube fruits are about the size of small plums with smooth, mahogany-colored skin and crisp, sweet flesh that is reminiscent of apples. Left hanging on the tree, the skin shrivels, the flesh turns brown, and the sugars concentrate, at which point it becomes obvious why the fruit also has been called Chinese date. The fruit has a single, elongated pit.

YIELD 60 pounds per plant

USDA COLD HARDINESS ZONES 6–9

AHS HEAT ZONES 11–5

POLLINATION Usually needs cross-pollination, although sometimes self-fruitful

LUSCIOUS LANDSCAPE INDEX 1 (attractive leaves, no insect or disease problems, late bloom never gets frosted, tasty fruits; spreads by root suckers)

REGIONS OF BEST ADAPTATION Jujube needs and thrives on abundant summer heat to ripen fruit but is otherwise widely adaptable.

PLANT SIZE AND GROWTH HABIT Jujube is a small tree whose small leaves give it a fine-textured appearance. Many varieties are heavily armed with intimidating spines. The trees spread underground by suckers, which can appear even many feet from the mother plant. The jagged branches present an interesting silhouette in winter.

Jujube

SEASONS OF VISUAL INTEREST These trees bloom quite late, sometimes sporadically all summer. The blossoms are tiny yet borne in frothy white clusters. Ornamentally, the tree is at its best throughout summer when the branches are clothed in very glossy green leaves. The leaves unfold early in the season because of jujube's very low chilling requirement.

Plant the tree in mowed lawn or in a bed with a low-growing ground cover where you'll be able to most easily see and remove (by mowing or pruning) the spreading root suckers.

GROWING TIPS Jujube is especially notable for tolerating just about any kind of soil, including those that are compacted or quite dry. The tree requires little or no pruning except for those root suckers that keep popping up out of the ground. Avoid digging around the plant; this encourages more suckers.

A few quirks might cause concern. Don't worry if some small branches die every year; these are naturally deciduous. And don't worry if it's the middle of summer and your plant is still, or again, flowering. This habit may be normal in your climate or could be a response to artificial lighting, such as from a streetlamp.

VARIETIES

What follows is but a sampling of jujube varieties, many of which were sent back to the United States from China by the plant explorer Frank Meyers in 1911.

'Lang' This upright tree is almost thornless. The fruits ripen right after those of 'Li' (see below) and are 2 inches long by 1½ inches wide and pear-shaped with a thin, shiny skin. The flavor is sweet with a hint of caramel, at its best dried.

'Li' This variety's fruits are among the largest of any jujubes. They are round, 2 inches in diameter, and have excellent flavor.

'Ming Tsao' The tree, small, erect, and not spiny, bears oblong fruit that is light brown, 1½ inches long, and sweet.

'Mu Shing Hong Tsao' This tree grows large and, with age, has few spines or suckers. The fruit is reddish brown and tapered, medium-sized, sometimes soft-kerneled ("seedless"), and a good keeper.

'Sherwood' A usually thornless tree, 'Sherwood' has a narrow weeping habit and is slow to begin bearing. The fruits ripen late, are large, and have excellent flavor.

'Silverhill' This large tree produces relatively few suckers and thorns. The fruits, borne in profusion, ripen late, and are about an inch across.

'So' This variety is slow growing and ornamental with its downward-curving branches. It yields moderate crops of crispy, round, good-quality fruits that ripen early.

'Twen Ku Lu Tsao' This tree has few suckers. Yields are low and the fruit does not keep well. The fruits are dark brown, flat, and very sweet.

HARVEST, STORAGE, AND USE Jujube flowers don't all bloom at the same time and the fruits, likewise, don't all ripen together. Ripening fruits change from green to mottled mahogany-red to solid mahogany red, at which time they are crisp and sweet. Fruits can be picked before they turn solid mahogany red to ripen off the tree, but they won't be as sweet as tree-ripened fruits. Soon after that crisp ripe stage, the skin of fruits that have been harvested or left on the tree starts to wrinkle. Inside, the flesh becomes brown, soft, and spongy, and the sweetness concentrates. Dried fruits will keep many months under cool, dry conditions.

In China, jujubes are eaten fresh, dried, smoked, and pickled. Say "jujube" and most Americans think of a fruit-flavored gumdrop. The original jujube candy was actually candied jujube fruit, long popular in China.

Jujube in the landscape

JUNEBERRY (SERVICEBERRY, SASKATOON, SHADBUSH)

Amelanchier canadensis (thicket serviceberry), *A.* × *grandiflora* (apple serviceberry), *A. humilis, A. laevis* (Allegheny serviceberry), *A. obovalis, A. sanguinea, A. stolonifera, and A. alnifolia* (saskatoon) .

Juneberries resemble blueberries in both size and color, except for the few varieties with white fruits. Juneberries, however, taste nothing at all like blueberries. At their best, they're juicy and sweet, with the richness of sweet cherry along with a hint of almond flavor.

NOTE: All Juneberry species have edible fruits, but I think the species with the best-tasting fruits are *Amelanchier canadensis* (thicket serviceberry), *A.* × *grandiflora* (apple serviceberry), *A. humilis, A. laevis* (Allegheny serviceberry), *A. obovalis, A. sanguinea, A. stolonifera, and* saskatoon (*A. alnifolia*). The various species are differentiated with difficulty even by botanists so are often, understandably, mislabeled by nurseries.

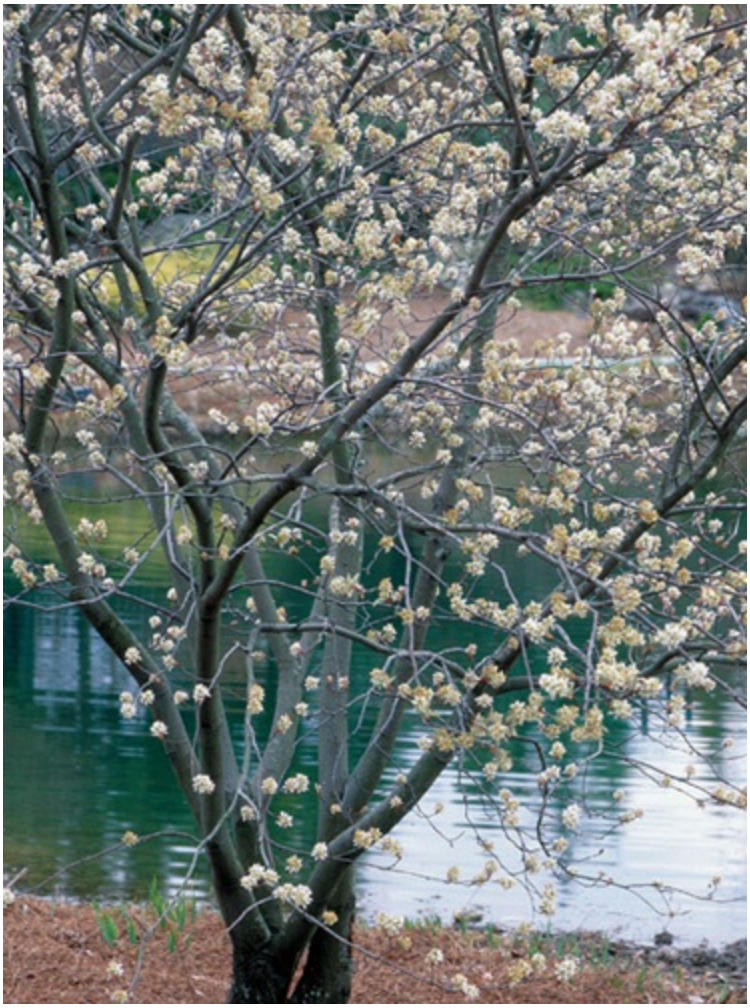
YIELD 10 pounds per plant

USDA COLD HARDINESS ZONES 3–8, varying somewhat with species, with saskatoons being the most cold-hardy, many of them hardy even to Zone 1!

AHS HEAT ZONES Variable, but generally 7–1

POLLINATION Self-fruitful, except white-fruited varieties, which need cross-pollination

LUSCIOUS LANDSCAPE INDEX 2 (beautiful flowers, good autumn leaf color, nice form in winter, pretty bark, very tasty fruits, little care; limited by pests in some areas)



Juneberry (*Amelanchier laevis*) in flower

REGIONS OF BEST ADAPTATION Juneberry is a cosmopolitan plant, with at least one species native in every state. Being a relative of apple, it's susceptible to many of the same insect and disease problems. These are generally worse in the eastern half of North America and in more-humid climates, but they often exist in hot spots that are very localized rather than regional. Juneberry is worth trying everywhere; just be ready to give up on the plant if your yard happens to be a hot spot for the relevant insects and diseases.

SEASONS OF VISUAL INTEREST Juneberry plants are year-round beauties. The show starts in spring with white, sometimes pink, blossoms. The leaves maintain a slight bluish cast through summer and then in autumn burst into shades of purple, orange, and yellow. The plants remain attractive even after the leaves drop, especially the trees and large shrubs, both for their tidy growth habit and for their bark, which is light gray with charcoal-gray striations.

Juneberry (*Amelanchier canadensis*) in fruit

GROWING TIPS Where they grow well, Juneberries are carefree plants that tolerate a range of soils in full sun or some shade. The low-growing, spreading species are especially tolerant of drier, poor soils. Plants sometimes sulk after you put them in, a condition best avoided by planting in warm, well-aerated soil with plenty of nutrients and water, as needed, or by planting in autumn.

As ornamentals, Juneberries need little pruning beyond the usual removal of dead, diseased, or aesthetically misplaced branches. Some pruning of bushy Juneberries improves fruit quality and quantity by getting rid of aging stems, which are those more than four years old, and by removing some of the youngest stems where they crowd each other, in the end leaving no more than six stems remaining. This pruning technique also works on hedges, whose taller stems can instead be shortened to vigorous, lower side branches. Juneberry trees rarely need pruning.

Juneberry fruits can be attacked by various diseases and insects that cause them to shrivel and dry, turn off color, or just drop before they're ripe. Juneberries are one fruit that do poorly on my property, perhaps because the low-lying site tends to be dank. That said, just 6 miles from my home, an ornamental planting of the same variety of Juneberries I attempted bear heavily, with neither insects, diseases, nor birds posing a particular threat to the fruit. If your Juneberries seem afflicted, either plant them in another location on your property or take juneberries out of your luscious landscape plans. The various pests can also mar the foliage.

I mentioned earlier that Juneberry fruits look like blueberry fruits, and birds are as fond of one berry as of the other. You might want to share your Juneberries with birds, but be forewarned: Birds will often strip bushes clean. Try growing white varieties, which birds are more likely to ignore. Drape a net, tied at the bottom, over the bushes when they're in fruit, or enclose the bushes in some sort of decorative walk-in cage that you cover temporarily with a net during the fruiting season.

PLANT SIZE AND GROWTH HABIT Juneberries range from medium-sized trees to short shrubs. The trees, which are often grown with multiple trunks or like large shrubs, include *Amelanchier laevis* (Allegheny serviceberry), *A. canadensis* (thicket serviceberry), *A.* × *grandiflora* (apple serviceberry). Saskatoon (*A. alnifolia*) is a slowly spreading, 8-foot-high shrub. The more treelike species of saskatoons look nice as specimen plants or, planted close together, as informal hedges. *A. humilis, A. obovalis, A. sanguinea, and A. stolonifera* are low-growing, spreading shrubs that look best in a naturalized planting.

HARVEST, STORAGE, AND USE Juneberries are one of the quickest fruits to come and go, so start picking as soon as they turn blue. And eat them, because—in my experience, at least—they don't freeze well. Besides pemmican, a Native American travel food made by pounding Juneberries with meat and fat, Juneberries make good jellies and juices.

VARIETIES

Many varieties exist because saskatoons, which represent one species of Juneberry, have been cultivated specifically for their fruits and because many other Juneberries have been cultivated specifically as ornamentals. What follows is a sampling of the many better varieties.

'Autumn Brilliance' This apple serviceberry makes a large, multistemmed shrub growing 15 to 25 feet tall and half that width. The large, pink-tinged flower buds open to snowy white blossoms that become red fruits. The leaves turn a spectacular orange, sometimes red or yellow, in autumn.

'Ballerina' This apple serviceberry, hardy to Zone 4, makes an upright shrub or small tree with spreading branches, 15 to 20 feet tall. The leaves turn purple-bronze in fall. The flowers are more than an inch across and are followed by tender, sweet, purplish black fruits up to half an inch in diameter.

'Cumulus' This Allegheny serviceberry is an upright tree, 20 to 30 feet tall and hardy to Zone 4. The leaves turn bright orange in autumn.

'Honeywood' A saskatoon, 'Honeywood' grows 7 feet tall, has spreading limbs, throws few suckers, and is hardy to Zone 2. It bears reliably and at an early age, yielding large clusters of flavorful, ½-inch fruits.

'Jennybelle' This variety is adapted to warmer regions, such as the Mid-Atlantic.

'Moon Lake' This saskatoon grows 6 to 10 feet high and is hardy to Zone 2. The fruit is of excellent quality and large (⅝ inch), but production is sporadic from season to season.

'Northline' Another saskatoon, this one grows about 6 feet tall, produces many suckers, and is hardy to Zone 1. It bears at a young age and is productive, with delicious large (⅝ inch) purple fruits.

'Paleface' This saskatoon forms a pyramidal plant 7 feet tall with few suckers. It is a prolific producer of large, snowy white, mild fruits and requires cross-pollination.

'Prince Charles' This Allegheny (possibly thicket) serviceberry is billed primarily as an ornamental, but it bears large fruits.

‘Prince William’ This shrub is 8 feet high and hardy to Zone 4. The leaves turn orange-red in fall and the fruits are ½ inch across.

‘R. J. Hilton’ This Allegheny serviceberry is a disease-resistant tree with good fall color. The flowers are deep pink in bud, then open with pink-flecked white petals. The purple fruits are small but very sweet.

‘Robin Hill’ An apple serviceberry, ‘Robin Hill’ grows 20 to 30 feet tall and is hardy to Zone 4. The large flowers are pink in bud, unfolding to white, and they open early.

‘Thiessen’ This saskatoon grows 15 feet high and wide and flowers relatively early in the season. It is a prolific producer of very large (greater than (⅝ inch), juicy fruits ripening later in the season than do other saskatoons. It’s one of the best-tasting varieties and hardy to Zone 2.

KIWIFRUIT

Actinidia deliciosa (kiwifruit) *; A. chinensis* (golden kiwifruit); *A. arguta* (hardy kiwifruit); and *A. kolomikta* (super-hardy kiwifruit)

The four most important species of kiwifruit for eating share certain fruit characteristics: All are elongated and roundish, and most have emerald green flesh with tiny black seeds. Some have yellow or red flesh. The flavor is generally sweet and tangy, somewhat reminiscent of pineapple.

Beyond the above characteristics, the various species diverge. The familiar kiwifruit of our markets is the size of a large egg and has a fuzzy skin that few people eat. Golden kiwifruit is about the same size, occasionally shows up in markets, and has just a light fuzz on its more edible skin; its flavor is very sweet and aromatic, smooth, and somewhat tropical with hints of muskmelon, tangerine, or strawberry. Hardy kiwifruits and super-hardy kiwifruits are grape sized—like large and small grapes, respectively—and have a smooth, edible skin and a sweet, very aromatic flavor somewhat reminiscent of pineapple and, depending on the variety, other tropical fruits.

Hardy kiwi

YIELD 50 to 200 pounds per plant

USDA COLD HARDINESS ZONES 7–9 for kiwifruit; 8–10 for golden kiwifruit; 4–9 for hardy kiwifruit; and 3–7 for super-hardy kiwifruit

AHS HEAT ZONES 9–6 for kiwifruit; 10–8 for golden kiwifruit; 9–4 for hardy kiwifruit; and 7–2 for super-hardy kiwifruit

POLLINATION Needs cross-pollination from a separate, nonfruiting male plant; one male can pollinate up to eight females

LUSCIOUS LANDSCAPE INDEX 2 (handsome foliage all summer long, decorative woody trunk, no serious backyard pest problems, delicious fruits; does demand multiple prunings every year)

GROWING TIPS Except where sunlight is very intense, as in the Southwest, plant all actinidias in full sun. Wherever summers are bright and hot, give male super-hardy kiwifruit plants just a bit of shade or their variegated foliage scorches. Actinidias also need perfectly well-drained soil; if you can't supply this, site elsewhere or set plants atop wide mounds of soil.

Actinidias are less cold-hardy when young than when older. Help them through their first winters by protecting them with some sort of wrapping to fend off the full brunt of winter cold and shield the developing trunks from direct sunlight. (The plants are native to the edges of forests, where their trunks do not experience intense sunlight.) I've used pipe insulation, tree wrap paper, or bundled cornstalks.

Actinidias usually look best climbing over an arbor or trellis. Select one or two of the most vigorous stems and train them upward, pinching off any side shoots. Then let those stems travel over the top of the support—these will be the permanent stems (cordons) of the plant, with fruiting shoots growing off them. Fruits are borne on new shoots that grow from near the base of the previous year's stems, so annual, late-winter pruning consists of shortening the previous year's stems to just a few buds. Plants become crowded over time, so late-winter pruning also entails thinning out stems growing off cordons to leave about 6 inches of space between them. These fruiting units eventually get decrepit and move farther and farther away from the cordon, so periodically rejuvenate them by cutting back more drastically. Pruning is not finished yet—actinidias grow rampantly through the summer and some of the more unwieldly shoots need to be cut back so the plant doesn't shade itself or deteriorate into a tangled mass of stems. Also prune off any stems arising along or at the base of the trunk.

These pruning directions notwithstanding, actinidias will fruit reasonably well with no more than a yearly, undisciplined whacking away aimed at keeping the plants in bounds. That's all the pruning the vines planted purely for decoration have received over the decades at many old estates and public gardens and they bear at least some fruit. In any case, males are kept only for their pollen, so you can cut away about three-quarters of their growth right after they've done their job blooming. You may want to restrain yourself with the stems of super-hardy male kiwifruit plants because of their especially decorative leaves.

Keep an eye out for Japanese beetles, which are as fond of actinidias as they are of many other plants. Approaches to controlling them include handpicking, trapping (two traps, at either end of your yard, far, far away from the plants), and under ideal conditions, milky spore disease or parasitic nematodes.

REGIONS OF BEST ADAPTATION Ideally, the site is not prone to late-spring frost because actinidia plants tend to leaf out early and the tender young leaves and shoots are not frost resistant. Warm

spells during winter can also cause plants to lose their cold-hardiness too quickly.

PLANT SIZE AND GROWTH HABIT Actinidias are rampantly growing vines. They'll reach 100 feet into trees in the wild but can be contained on about 200 square feet of trellis or arbor under cultivation. Planted by itself, a vine makes a mildly self-supporting tangle of mounded stems akin to a large shrub. The vines twine to cling to support. Super-hardy kiwifruit and golden kiwifruit vines are less vigorous than are the other species.

Ornamental foliage of hardy kiwi

SEASONS OF VISUAL INTEREST As testimony to their beauty, actinidias have been grown in America longer as ornamental plants than as fruiting plants. The vines develop picturesque, contorted trunks with peeling bark. The leaves are very attractive and stay so throughout summer. Especially attractive are the leaves of hardy kiwifruit, which are apple green with red petioles, and super-hardy kiwifruit, the males of which have silver and pink variegation. The markings are so distinctive that some look as if they were brushed onto the leaves by an artist. Female plants' leaves are sometimes variegated, but less so.

VARIETIES

Below is a sampling of some of the actinidia varieties available. Even though there are a few *A. kolomikta* varieties, I have not listed them because they are often sold generically as 'Arctic Beauty', which may refer to the species rather than a specific variety.

'Abbott' This female variety of *A. deliciosa* is productive and relatively cold-hardy, and has a

medium-low chill requirement. The fruit is elongated and medium-sized.

'Ananasnaja' A reliable and productive *A. arguta* variety, this one yields firm, 1½-inch long fruits with excellent flavor.

'Blake' This is a precocious and productive *A. deliciosa* female. The fruits are small and pointed, and ripen a month or so earlier than 'Hayward' (see below).

'Chico Male' ('California Male') This is, as its name tells us, an *A. deliciosa* male.

'Geneva' This *A. arguta* yields well, has excellent flavor, and ripens early, about three weeks before Ananasnaja.

'Hayward' (same as 'California Chico') This *A. deliciosa* female is the one you see in markets. It's not very vigorous and has a high chill requirement. The fruit ripens late, keeps well, and has good size, flavor, and appearance.

'Issai' This variety is a hybrid, possibly of *A. arguta* and *A. polygama.* It's quite precocious and compact, and sets some fruit without a male pollinator. The fruit has excellent flavor. The vine is not very cold hardy, though, and the fruit ripens late.

'Jintao' This *Actinidia chinensis* female has large, long fruits with an almost hairless brown skin and greenish yellow flesh that ripens to yellow and orange. This excellent variety stores well,

'Meader Male' This *A. arguta* is a good pollinator for females of the species.

'Michigan State' (also known as 'MSU') This *A. arguta* bears very large, elongated fruit boasting very good flavor.

HARVEST, STORAGE, AND USE Actinidias ripen in late summer and fall. Fruits give little indication that they are dead ripe beyond softening, and, in the case of hardy kiwifruit, shriveling a little. When ripe, these hardy kiwifruits typically tear from their fruit stems and super-hardy kiwifruit begin to drop. None of the actinidias stores very well, even refrigerated, when dead ripe.

Actinidias picked while they're still firm will finish ripening off the vines and have excellent flavor, but only if they've first achieved a certain level of maturity. The fruits on even a single vine don't ripen together, so you have to play the averages in determining when to harvest. To determine if fruits are ready to ripen well off the vine, harvest some and see if they soften and taste good after sitting a few days at room temperature. The most quantitative method is to use a small, handheld (but somewhat expensive) device called a refractometer to measure "soluble solids," which are, essentially, sugars. Squeeze a drop or two of juice from test fruits onto the refractometer and look for a reading of 7 percent for kiwifruit or 8 to 10 percent for hardy kiwifruit. At this level, the fruits are ready to pick and will ripen well off the vine. A few fruits will already be softening on the vine.

Picked firm and refrigerated before they begin softening, the fruits will keep for weeks (golden, hardy, and super-hardy kiwifruits) or months (kiwifruit). The fruits ripen slowly under refrigeration and quicker if brought to room temperature. When ready to eat, the fruits are soft and sweet.

LINGONBERRY

Vaccinium vitis-idaea var. *vitis-idaea*, *V. vitis-idaea* var. *minus*

Lingonberry is a small red berry that might be compared to its close relative, the more familiar Thanksgiving cranberry (*V. marcocarpon*). The fruits are used in the kitchen in similar ways, and neither fruit is sweet. But a lingonberry is smaller, the size of a pea, and as far as flavor, lingonberry couples just enough sweetness with a rich, unique aroma to make the fruits—if picked dead ripe—delicious plucked off the plants right into your mouth or mixed with, say, your morning cereal. Not something most people would ever do with a cranberry.

Lingonberry

YIELD 5 to 10 pounds per 100 square feet

USDA COLD HARDINESS ZONES 4–7 (actually, there two botanical varieties of lingonberry; the smaller-growing of the two, *V. vitis-idaea* var. *minus,* rarely encountered and hardly represented by any cultivated variety, is hardy into Zone 2)

AHS HEAT ZONES 6–1

POLLINATION Partially self-fruitful, bearing larger and more berries with cross-pollination

LUSCIOUS LANDSCAPE INDEX 1 (beautiful plant year-round, tasty berries, low upkeep once established, excellent flavor)

REGIONS OF BEST ADAPTATION Lingonberry is a plant of cold climates, thriving only where summers don't stay torrid for too long. In its native haunts, lingonberry is usually covered through winter with a blanket of snow. Lingonberry does not tolerate soils that stay as wet as those enjoyed

by cranberry.

PLANT SIZE AND GROWTH HABIT Lingonberry grows only a few inches high, with slender woody stems, and spreads via underground stems. As such, it makes a wonderful, fruiting ground cover.

SEASONS OF VISUAL INTEREST Lingonberry is a year-round beauty. The plant is evergreen, with leaves of a similar glossiness, stiffness, and verdure as those of holly, except that lingonberry leaves are about the size and shape of mouse ears. In spring, cute urn-shaped blossoms dangle singly or in clusters near the ends of the thin, semi-woody stems. These urns, white blushed with pink, won't stop traffic from the street, but are best appreciated when plants are grown where they can be looked at frequently and up close. If you miss the spring floral show, you'll get another chance, with a mid- to late-summer encore (not at far northern latitudes, though). The flower shows are followed by the fruit show: bright red berries that hang on the plants for a long time, well into winter, making a perfect Christmas decoration *in situ*. Fruit yields are greater from the second flowering than from the first.

I like to combine lingonberry with other plants—such as mountain laurels, rhododendrons, and azaleas—that enjoy similar soil conditions. One of my favorite combinations is with lowbush blueberry, the two looking especially pretty in autumn, when lingonberry's greenery creates the perfect backdrop for its red berries (unless you eat them) and for blueberry's then crimson leaves. In winter, lingonberry's foliage is a good foil for blueberry's reddish stems. (Lingonberry and lowbush blueberry mate as well in the kitchen as they do in the landscape.) I couldn't help nestling a few spring bulbs into the ground among my lingonberry and blueberry plants.

GROWING TIPS Lingonberry thrives in full sun or partial shade, though partial shade is preferred where summers are hot. My plants grow in beds near the east and north sides of my home, where they are shielded from the late, hot afternoon sun.

Lingonberry demands a soil that is high in humus, infertile (yes, you read that right), moist, well aerated, and very acidic, much more so than for most other cultivated plants. The first step, then, is to test the soil to see if it has the needed pH of 4.5 to 5.5. If not, dig elemental sulfur, a mined, natural mineral, into the top 6 inches of ground before planting. Use ¾ pound per 100 square feet in sandy soils, or 2 pounds per hundred square feet in loams, for each pH unit that the soil is initially above a pH of 4.5. Where soils are naturally very alkaline (pH higher than 8), such as in many parts of western United States, excavate soil at the planting site and replace it with a fifty-fifty mix of peat moss and sand.

Next, rid the area of weeds, against which lingonberries are poor competitors, and then mix a bucketful of acidic peat moss into each planting hole to provide the needed humus and its associated benefits as well as to help acidify the soil. If the soil at the planting site tends to stay wet, build up mounds of soil and peat and plant the lingonberries on the mounds, where their shallow roots can stay above the water level.

Now plant. To fill in a bed in a reasonable amount of time, set the plants about a foot apart in each direction. Mulch with leaves, sawdust, or other organic material a couple of inches deep. Plants will need care their first season if they are to thrive, perhaps even survive, care that can be

summed up mostly in one word: *water*. One-half gallon per week per square foot of planted area, which is the equivalent of an inch depth of water, keeps plants happy whether that water comes from the sky, a sprinkler, or drip irrigation.

Ongoing maintenance of established lingonberries consists of mulching and occasional fertilization. Over time, the mulch decomposes to feed the soil and enrich it with humus, so replenish the mulch as needed. Fertilize lightly to avoid burning lingonberry's tender roots and encouraging weeds, and use an acid type fertilizer. I use soybean meal, spread late each autumn at the rate of a pound per 100 square feet. But also watch your plants' leaf color and growth as a guide to fertilization. Periodically test the soil pH and add more sulfur if necessary, just sprinkling these maintenance amounts on top of the ground. And depending on your climate and soil, supplemental watering may be needed after plants are established. Look at your plants and check the soil.

Some pruning every few years will help the plants remain productive after they have been established and growing well; pruning stimulates growth of young stems on which flowers and fruits are borne. Lightly shear back a portion of the bed in late winter. Plants that have been pruned will not fruit that season, so prune a different section of your lingonberry bed every few years and you'll never suffer from a lack of berries.

VARIETIES

'Ammerland' Introduced from Germany, this variety is vigorous and productive. It's very similar to the popular 'Koralle' (see below) in growth and yield, with slightly larger berries.

'Erntedank' This variety, from Germany, has relatively pale leaves and moderate growth. It produces good summer and autumn crops of small- to medium-sized berries.

'Erntekrone' These vigorous, stiffly upright plants have roundish, dark green leaves and are very high-yielding. The fruits are dark red and large.

'Erntesegen' This prominent variety won a Gold Medal in the German Garden Show in 1981. The plants are very vigorous plants, with large leaves, and are quite productive, with profuse second bloom. The berries are late-ripening, bright red, and very large.

'Ida' Originally from Sweden, this compact plant grows about 8 inches high. It is precocious and has a profuse second bloom. The fruits ripen early and are large and dark red. It's an outstanding ornamental because of its beautiful leaves and abundant and repeated bloom.

'Koralle' This Dutch variety actually represents a seedling population of 35 plants, so expect some variation depending on the clone from which a plant was propagated. 'Koralle' is the most popular lingonberry in Europe and winner of the prestigious Award of Merit 1976. The plants are vigorous, upright, and bushy but spread slowly. They are productive in good soils, yielding bright red, small to medium-sized berries that ripen midseason.

'Masovia' A Polish variety, 'Masovia' grows vigorously and yields heavily. The plants spread quickly and the berries are medium-sized and bright red.

'Red Pearl' This Dutch variety spreads very quickly, but is not very productive. The stems are upright, reaching 16 inches high. The dark red fruits are medium-sized and have excellent flavor.

'Regal' This variety, selected in Wisconsin from Finnish seeds, spreads rapidly and is precocious. The plant is compact, growing only 8 inches high or less. Yields are low and the fruits

are small and dull red.

'Sanna' Introduced from Sweden, this one spreads moderately fast and has erect stems 8 to 12 inches high. Productivity is excellent, with attractive crops of bright red berries both in the summer and, often to a much lesser degree, in autumn.

'Scarlet' This productive variety from Norway grows vigorously and is 12 to 18 inches high. The berries are medium-sized and light red.

'Splendor' Selected in Wisconsin, 'Splendor' spreads moderately fast with stems growing 6 to 8 inches high. The plant is precocious and bears medium-sized, carmine berries. Yields are low.

'Sussi' From Sweden, this is a low-growing variety, reaching only 4 to 8 inches high. It spreads rapidly and produces moderate yields of medium-sized, dark red fruits.

HARVEST, STORAGE, AND USE If you want to nibble lingonberries, just pluck off individual berries by hand. For harvesting in quantity, use a berry comb (see page 177 for sources.), like that used for harvesting lowbush blueberries, in which case your harvest will need some cleaning to rid it of leaves and unripe fruits.

No need to rush eating or picking lingonberries. They keep well on or off the bush. Refrigerated, you can enjoy the harvested berries for at least eight weeks. In 19th-century Sweden, lingonberries were kept from one year to the next as "water lingon," made by merely filling a jar with the berries, then pouring water over them.

There is seemingly no end to the uses for lingonberries. In Finland, for example, the berries are the traditional accompaniment to blood sausage and blood pancakes. Lingonberries also find their way into meat stews, sauces, juice, and wine. They make excellent jam alone, and especially so combined with rose hips. The juice is delightfully refreshing mixed with that of other berries. Combined with vodka, lingonberries make a refreshing and potent drink. One recipe calls for soaking a quart of berries in a quart of vodka for two months, then pouring off the liquid into a bottle and adding half a quart of sugar to the berries. Let the berries and sugar sit about a week while the sugar draws out more liquid, then pour it in with the first decantate. Let that mix age for a month before tippling.

MAYPOP

Passiflora incarnata

Maypop vines in full flower

Maypop is a cold-hardy species of passionfruit and, like the more familiar tropical passionfruit, the fruit is egg-sized and filled with air and seeds, each seed surrounded by a tasty, gelatinous pulp. If you think you're not familiar with the flavor of passionfruit, you may in fact know it as the main flavor in Hawaiian punch. Or, quoting the 17th-century writer William Strachey for a description of the fruit, maypop has "the bigness of a green apple, and hath manie azurine or blew kernels, like as a pomegranat, a good summer cooling fruit."

YIELD 12 fruits per plant, more or less depending on the length and warmth of the growing season; yield can increase as each plant increases its spread via underground roots.

USDA COLD HARDINESS ZONES 5–10

AHS HEAT ZONES 12–4

POLLINATION Needs cross-pollination

LUSCIOUS LANDSCAPE INDEX 1 (tasty fruit, awesome flowers, little care)

REGIONS OF BEST ADAPTATION Maypop has no particular pest problems. The plant does wake up late in the season, and flowering and pollination depend on growing conditions. Also, a sufficiently warm and long summer is necessary to ripen the fruits. Maypop is native to the American Southeast (Zones 8–10), where it grows exuberantly, too exuberantly for some people to the extent that it has been considered a weed there. Make sure you can restrain it in keeping with its expected vigor.

SEASONS OF VISUAL INTEREST Maypop sports glossy leaves that remain healthy and green all season, but the real show is from the breathtaking, intricate flowers that put the "passion" in passionfruit. That "passion" reflects the flowers' use by early Christian missionaries in America to teach the passion of Christ to the Native Americans. The ten so-called lavender or white petals

(botanically, five petals and five petal-like sepals) were taken to represent the ten apostles present at the crucifixion. The thread-like rays of the purple or pink corona, darker at its base, were taken for symbols of the crown of thorns. The five stamens and three styles referred, respectively, to the five wounds of Christ and the three nails used in the crucifixion. Even the rest of the plant figures in, with the three-lobed leaves symbolizing the Trinity and the tendrils representing the scourges.

Nowadays, the flowers, which unfold about a month after shoots poke through the ground and then continue to do so almost nonstop until autumn, are more likely to inspire horticultural than religious passions. Each flower lasts only a day and exudes a lemony musk aroma.

GROWING TIPS Especially in colder regions, give maypop the warmest and sunniest location available. There's not much to growing this plant beyond taking into consideration its spreading habit and giving the vines some support on which to climb. Wooden latticework, strings, even a chain-link fence are all appropriate grips for the tendrils. Maypops can also be trained to ramble over early-flowering shrubs, as the maypop, being a "late riser" in the spring, won't interfere with the spring show of the shrub. Then, from midsummer on, the shrub can once again burst into show —of maypop flowers this time. Except in warmer regions, maypop is unlikely to choke out most shrubs because by the time a maypop vine builds up steam, late summer and shrubs are winding down anyway. My maypop shares a small bed with a lilac bush, with the surrounding lawn and its attendant lawn mower keeping maypop's spread in check. Maypop's spread can also be thwarted merely by pulling out unwanted suckers with a quick jerk when they're 3 inches high. At the end of each growing season, cut back all the stems once they turn brown.

In colder winter regions, mulch maypops with extra straw, wood chips, or other organic materials to insulate the roots.

Maypop flowers need cross-pollination to set fruit, but even when pollinated, not all flowers will fruit. That's because on every plant some flowers, although having male and female parts, are functionally male. Functional males are so either because their female parts are held upward out of the way of insect visitors or because they have atrophied. Throughout the season, a maypop plant adjusts the types of flowers it has according to growing conditions. As more fruits set or light becomes limited, fewer perfect flowers are produced. An increasing percentage of flowers are male as the season progresses, unless no fruits have set already. A fruit follows each successfully fertilized flower by two to three months.

Hand-pollination ensures best-quality fruits and, where natural pollinators (mostly carpenter bees) are not abundant or not sufficiently active, maximum yield per vine. Hand-pollination typically results in about 50 percent fruit set as compared with the few percent fruit set that results when relying on natural pollinators. Hand-pollinate as soon as the flowers open in late morning, remembering that each flower is open for one day only and that you need two different clones for cross-pollination. Because maypops spread underground, shoots growing out of the ground far apart could be mistaken for different plants when they might very well be one plant sharing a root system (i.e., be the same clone). So keep plants well separated to make sure they are growing well and flowering.

PLANT SIZE AND GROWTH HABIT In contrast to tropical passionfruits, which are woody vines, maypop is an herbaceous perennial herb. The top of the plant dies to the ground each winter but the

roots survive and send up new shoots relatively late in spring. The roots spread underground, sending up new shoots at some distance from the mother plant. Stems can grow 20 feet in a season, and cling to support by means of tendrils.

VARIETIES

Little breeding has been done of maypops and what few plants have been developed were selected mostly for qualities other than fruit flavor. Some of that breeding has also involved tropical passionflower species, and the resulting hybrids are less cold-hardy than genetically pure maypops, but often very tasty and of various colors.

'Alba' The only variety that represents the pure maypop species, this one was selected for its white, extremely fragrant flowers.

'Incense' This hybrid maypop (with *P. cincinnata)* is hardy probably to Zone 6 and has deep blue flowers that are 5 inches across and much showier than those of maypop. Incense is pollen-sterile, so it cannot be used to pollinate either itself or any other passionflowers. Incense fruits are oblong, about 2 inches long, and drop when ripe. They are chartreuse, with a roselike fragrance and a sweet, sprightly flavor.

HARVEST, STORAGE, AND USE Maypops ripen through the season, so plan to harvest frequently. For best flavor, let a fruit mature and drop to the ground before gathering it. Handle a fruit gently because the skin is thin, possibly wrinkled. Store fruit for a week or two in a cool, not overly dry room to allow full flavor to develop. Then scoop out the pulp with a spoon, suck off the juice, and spit out the seeds. Or scoop out the inside and eat it, seeds and all, like a pomegranate.

Use of maypops need not end with the fruit. If you're willing to sacrifice some blossoms for beauty rather than for fruit, pick and float them indoors in a bowl of water. Dried maypop vines are a mild sedative drug, used as tea by Native Americans to treat insomnia.

Maypop fruit on the vine

MEDLAR

Mespilus germanica

Medlar fruits resemble small, russeted apples, tinged dull yellow or red, with their calyx ends (the end across from the stem) flared open to enclose a flat disk. Not a pretty fruit to behold, medlar has been aptly described by J. C. Woodford (in 1939 in *The Gardener's Chronicle*) as a "a crabby-looking, brownish-green, truncated, little spheroid of unsympathetic appearance" and, even more disparagingly, during the Middle Ages by Chaucer as the "open-arse" fruit. Inside, though, the ripe flesh is brown and as soft as a baked apple with a refreshingly brisk flavor akin to that old-fashioned applesauce laced with cinnamon and winy overtones. Embedded in the pulp are five large seeds.

YIELD 20 pounds per tree

USDA COLD HARDINESS ZONES 5–8

AHS HEAT ZONES 9–4

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 1 (no maintenance, pretty flowers, pretty autumn color, pretty with fruit on leafless tree in autumn, delicious fruit)

Medlar

SEASONS OF VISUAL INTEREST Medlar blossoms are large and white or slightly pink, 1 to 2 inches across, and look much like wild roses, to which they are related. Because the flowers unfold after the leaves and are carried singly on the ends of short shoots, each flower sits in front of and is pleasantly framed by a whorl of dark green leaves. The leaves have a rough surface and remain healthy and forest green through summer, then turn warm, rich shades of yellow, orange, and russet in autumn. Fruits left on the tree after leaf drop decorate the bare stems like little pompoms. Because the fruits hang so well and for so long, the tree is also suited to locations, such as along walkways, where fruit drop would otherwise cause problems.

PLANT SIZE AND GROWTH HABIT Medlar is a small tree, typically 10 feet high or less, but occasionally up to 20 feet. Elbowed branches lend the tree, which can be very long-lived, a picturesque, rustic air. Medlar is a perfect specimen tree for the small yard or, as long as not shaded, mingling with shrubs and flowers in a mixed border.

GROWING TIPS Give medlar a spot in full sunlight and soil that is well drained and moderately fertile and it will thrive with little or no care. Medlar is propagated by grafting onto any one of a number of rootstocks, including pear, quince, and hawthorn. To avoid problems with delayed

incompatibility with the rootstock, plant medlar with the graft below ground level to encourage rooting of the medlar portion of the composite tree. Occasional pruning to let in light among the branches and to remove dead, diseased, and aesthetically out-of-place branches will keep medlar at its best.

VARIETIES

A number of medlar varieties have turned up in recent years, some of which are probably the same as other varieties but with different names slapped on them. Some of these are 'Breda Giant', 'Macrocarpa', 'Marron', 'Monstreux d'Evreinoff", 'Nèfle d'Octobre', 'Nèfle Précoce', 'Nèfle Tardive', 'Pucia Supermol', 'Puciolot', 'Sultan', and 'Westerveld'. The following varieties have been available longer, in the United States, at least:

'Dutch' (also called 'Giant', 'Monstrous', and 'Dutch Giant') This variety dates back hundreds of years. The tree is vigorous, the branches spreading to make the plant flat-headed almost to the point of weeping. The fruit is large, often 2½ inches across, and has good flavor.

'Nottingham' (also called 'Common' and probably the same as the 'Neapolitan' of older texts) This may be the oldest existing variety. The tree grows somewhat straggly with an upright habit, and the fruit is small, usually 1½ inches or less across, but with excellent flavor.

'Royal' This variety has characteristics intermediate between 'Dutch' and 'Nottingham'. The tree is moderately upright with a rounded form. The fruit is medium-sized, with good flavor.

'Stoneless' Besides keeping well and lacking seeds, this variety has little to recommend it. The fruits are only ¾ inch in diameter and have poor flavor.

REGIONS OF BEST ADAPTATION Medlar has no limitations beyond those of extremes of frigid winters and scorching summers.

HARVEST, STORAGE, AND USE

Medlars are rock hard and puckery when ready for harvest, which begins when the leaves start to drop. They need to be bletted before becoming edible—that is, placed calyx-end down on a shelf or a counter in a cool room and allowed to soften. Bletting takes at least a couple of weeks, depending on the temperature, and the fruits show that they're ready to eat by softening and by the darkening and slight wrinkling of their skins. Even though the unripe fruits are hard, handle them gently.

Some people are more lax with bletting their medlars, letting them remain stuck to the bare branches and then just picking up ripe ones from the ground or, later into fall and winter, even right from the tree. Such fruits are still good, but usually drier than those bletted to perfection.

The way to eat a ripe medlar is to halve the fruit and scoop or suck our the delicious flesh. Medlar pulp also tastes good folded into cream or cooked into the usual array of jams, jellies, and tarts. Medlar is said to be the perfect accompaniment to an after-dinner drink of port.

MULBERRY

Morus alba, M. nigra, and *M. rubra*

Mulberry is an aggregate fruit, looking but not at all tasting much like a blackberry. The fruits are usually about an inch long and about half that width; at least one variety, 'Pakistan', is a svelte 3 inches long. The species' botanical or common names—red, white, and black—have nothing to do with the color of the fruit. Some white mulberries, for example, are white, others are lavender, and still others are almost black. Most mulberries are very sweet, often so cloying that some people prefer them slightly underripe. Flavor varies from plant to plant, though. One mulberry, the black mulberry, is, in my opinion, among the best-tasting of all fruits, its flavor a most congenial blend of sweetness and tartness along with refreshing juiciness that seems to come from more than just liquid. Black mulberry begins ripening in mid- to late summer; white and red mulberries start to ripen in late spring.

Mulberry

YIELD 5 to 25 pounds per plant

USDA COLD HARDINESS ZONES 5–8 for most *M. alba* and *M. rubra*, although some *M. alba* are hardy only to Zone 8; *M. nigra* is probably hardy only in Zones 7–10

AHS HEAT ZONES 9–4 for *M. nigra*; 9–3 for most *M. rubra* and *M. alba*

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 2 (very easy to grow, good form, precocious, no pests; no season of striking beauty)

REGIONS OF BEST ADAPTATION Red mulberry, an American native, and white mulberry, whose origins are in Asia, grow readily almost everywhere, as do their hybrids. Some consider them to

be too adaptable—white mulberry is the second most common "weed" tree in New York City (but what a boon to those who love the fruits!). Black mulberry, a native of western Asia, is much less adaptable. It grows best in Mediterranean climates, such as are found in California, with mild winters and dry summers. That said, my potted black mulberry does fine wintering in my cool basement, then summering in my greenhouse, the latter location not for heat but just to keep birds at bay.

No matter where you grow mulberries, or what kind, don't plant them where their branches will drape over a walkway or a driveway. Most mulberries drop their ripe fruits and the fruits stain wherever they fall, or they get tracked indoors on the bottoms of feet and shoes.

PLANT SIZE AND GROWTH HABIT Mulberry is a variable species, even the leaves on a single plant varying in shape. White and red mulberry generally grow to become medium to large-sized trees (over 50 feet, in some cases) with many small twigs growing off larger limbs, even lower down on an old trunk. Weeping forms exist. Black mulberry is quite different from the other two species. Black mulberry trees are smaller, rarely growing more than 30 feet high and often growing as no more than bushes. And the smaller branches of black mulberry are notably thick and robust.

SEASONS OF VISUAL INTEREST Mulberry is not striking at any time of year, yet for the whole year it's a very pleasant-looking plant that bears tasty fruits with no trouble. The form of older trees can be picturesque, especially if they've been pruned occasionally to highlight a certain aspect of the form. The leaves generally remain healthy and lush all summer long (sorry, no autumn color worth noting). I like the way white mulberry's leaves glisten in the summer sun; this is the only of the three species with a glossy leaf surface. Weeping mulberry grafted low on an upright stem makes a decorative mound of greenery that doubles as a child's playhouse, providing both food and lodging!

GROWING TIPS Mulberry is a carefree ornamental and fruiting tree typically bearing its first crop the first or second year after planting. Do give it full sun and well-drained, moderately fertile soil. Prune it when young to develop a strong and comely shape. Beyond that, no special pruning techniques are required. Just remove dead, exhausted, and overcrowded wood. If desired, mulberry trees can be kept to a tidy form—even as tidy as an espalier—by developing a set of main branches, then pruning laterals to six leaves in July in order to develop spurs near the main branches.

Birds are very fond of mulberries, but trees usually produce enough fruit to satisfy fruit-loving humans as well as our avian friends.

VARIETIES

'Black Persian' This *M. nigra* bears large fruits, over an inch long and almost an inch wide. The fruits are juicy with a delectably rich, subacid flavor and the tree is fairly drought tolerant once established.

'Collier' This hybrid of *M. alba* and *M. rubra* is productive and hardy. The fruit is medium-

sized and almost black with very good flavor, sweet with a trace of tartness, about like that of 'Illinois Everbearing' (below).

'Geraldi Dwarf' This tree is yet another species, *Morus macroura*, that is compact and suitable for Zones 5 through 8. The fruits have good flavor.

'Illinois Everbearing' This hybrid, probably of *M. alba* and *M. rubra* yields one of the best-tasting mulberry fruits (*M. nigra* excepted). They are slender and black and ripen over a long period, beginning about when raspberries ripen and continuing into July and August. The tree is hardy to 30°f below zero.

'Oscar' This *M. alba* is a wide-spreading tree that yields an abundance of delicious, dark purple berries ripening over a long season. It's touted, along with 'Illinois Everbearing', as one of the best-tasting non–*M. nigra* mulberries.

'Pakistan' This *M. alba*, originating in Pakistan, is quite different from the usual *M. alba*. The fruit is extremely large, sometimes more than 3 inches long, with firm flesh and excellent flavor. The tree has heart-shaped leaves and is hardy only to about 25°f.

'Weeping' This variety may be the same as the one called 'Teas' Weeping Mulberry'. At any rate, it has a weeping form and bears very tasty, very dark fruits.

'Wellington' This may be the old variety 'New American', which was also sold under the name 'Downing'. It yields fruits that are slightly smaller than those of 'Illinois Everbearing'. They're reddish black and medium-sized, with good flavor, and are borne over a long period.

HARVEST, STORAGE, AND USE Mulberries ripen over an extended season. Ripe berries fall readily from the trees (some even before they're ripe). Black mulberries tend to cling to the stems longer than do ripe fruits of the other two species but will drop when very, very ripe. To harvest large quantities, spread a clean cloth or plastic sheet on the ground, then shake the limbs. Ripe fruit will keep for only a couple of days or so.

The ripe fruit is delicious eaten out of hand but can also be made into wine. In medieval England, mulberries were made into murrey, a blue-black purée added to spiced meats or used as a pudding. Harvest mulberries slightly underripe for cooking into pies and tarts. Dried mulberries are a winter staple for some of the peoples living in the rigorous climate of the high foothills of the Himalayas.

PAWPAW

Asimina triloba

Pawpaw, despite being quite cold-hardy, has many tropical aspirations. From the outside, each fruit resembles a mango and the fruits hang together from the stems in clusters recalling those of banana. Inside, the fruit is creamy smooth and white with a flavor very much like banana or vanilla custard along with hints of pineapple, mango, and avocado. There's also a row of inedible, lima bean–sized brown seeds. The fruits ripen in late summer and autumn. Don't confuse this fruit with papaya, which *is* tropical and is sometimes called pawpaw.

YIELD 25 pounds per plant

USDA COLD HARDINESS ZONES 4–8

AHS HEAT ZONES 8–5

POLLINATION Needs cross-pollination

LUSCIOUS LANDSCAPE INDEX 1 (beautiful tree in leaf in summer and fall, has nice form, needs little or no care, bears delectable fruit)

REGIONS OF BEST ADAPTATION Within its range of winter cold tolerance and need for enough summer heat to ripen the fruit, pawpaw has no other regional limitations.

PLANT SIZE AND GROWTH HABIT Pawpaw trees usually mature at about 25 feet tall. The plant is easily kept much smaller with just a little pruning. The form of the tree, at its best, is that of a neat pyramid.

Pawpaw fruit

SEASONS OF VISUAL INTEREST With their naturally pleasing form, pawpaw trees are nice to look at all through the year. All summer long, those well-placed branches are clothed in large, lush leaves that, like the fruits, recall the tropics. The leaves grow 8 to 12 inches long and perhaps a third that width, and look much like those of avocado trees. Throughout summer, the leaves retain the freshness and exuberance they possessed when they unfolded in spring. Come autumn, pawpaw sheds its tropical aspirations as the leaves turn a clear golden yellow before dropping.

GROWING TIPS Nurseries sell both seedling trees and grafted trees of named varieties. One of the most important things in growing pawpaws is to start with grafted trees of named varieties; they'll bear soonest and you'll be assured of the highest-quality fruits. Pawpaws are more difficult to transplant than are many other trees, so make sure the plants you buy come from a reputable nursery (such as one that sells named varieties, not just seedlings), and plant a potted tree, or else plant only in spring. Pawpaws thrive in full sunlight in the same well-drained, moderately fertile soil as do most other cultivated plants.

Once established, your pawpaw trees should need little—probably nothing—in the way of pruning or pest control. Fruits are borne on year-old stems, so very old trees might benefit from some pruning to stimulate the growth of young, fruitful stems. Sprouts grow from a pawpaw tree's

spreading roots and these need to be periodically ripped out, cut back, or mowed down. Otherwise, a single tree can expand into a thicket that can shade itself out of good production.

Each pawpaw flower is a multiple ovary, and with good pollination can yield a cluster of even nine fruits. Pruning or props are needed to avoid limb breakage when crops are heavy.

Pawpaws enjoy an organic mulch beneath their limbs. This mulch not only provides the usual benefits to roots and soil but also cushions the impact of the inevitable falling fruits.

VARIETIES

'Mitchell' The fruit ripens midseason and is medium to large with excellent flavor, similar to or better than 'Overleese' (below). The fruit has a yellow skin and golden flesh.

'NC-1' This very vigorous hybrid of 'Davis' and 'Overleese' (below) ripens early. The fruit has few seeds, yellow skin, and buttery yellow flesh with excellent flavor.

'Overleese' This late-ripening variety has few but large seeds and excellent flavor. The fruit size is variable, the flesh is yellow to orange, and the skin, when ripe, remains green.

'Pennsylvania Golden' ('PA-Golden') Included here are four varieties, differentiated as Pennsylvania Golden #1, #2, #3, and #4. They are all early ripening and have yellow skin and golden flesh with excellent flavor.

'Rappahannock' These medium-sized fruits have yellow-green skin and yellow flesh when ripe. The fruit ripens midseason and tends to make excessive vertical shoots that must be pruned away.

'Shenandoah' The large fruits have a luscious, firm yet custardy flesh of which a relatively small percentage is seed. The flavor is relatively mild. The fruits ripen mid- to late season.

'Sunflower' This variety bears reliably. The fruits ripen late, have relatively few seeds, and can be large.

'Susquehanna' Among the largest and sweetest of pawpaws, this variety also has a low percentage of seeds. The flavor is rich—too rich for some people. The leaves have a naturally slight pucker. Fruits ripen mid- to late season.

'Taylor' ('Taylor 1') This tasty variety has green skin and yellow flesh and ripens late.

'Taylor 2' ('TayTwo' or 'Taytoo') The fruits are medium-sized with excellent flavor and keep well. Some report this variety to be a shy bearer; others describe it as prolific.

'Wells' The large fruits have green skin and yellow flesh. It was the winner of the 1990 pawpaw contest sponsored by Kentucky State University.

'Zimmerman' These small to medium-sized fruits have yellow skin and excellent flavor (one of my favorites). The fruits ripen mid- to late season.

HARVEST, STORAGE, AND USE Pawpaw fruits tell you they're ripe by softening slightly. The skin might also turn yellowish and become speckled with dark blotches. Ripe or nearly ripe fruits also tend to drop. I go out each morning to gather freshly dropped fruits. Picked just as they begin to ripen, the fruits can come to full flavor in a bowl on the kitchen counter. Slightly underripe fruits will also keep, refrigerated, for about four weeks. The easiest way to keep pawpaws longer is to

scoop out the pulp, remove the seeds, and freeze it.

Eat a pawpaw fruit by cutting it in half and scooping out the flesh with a spoon. Don't eat either the skin or the seeds, but do suck off the very tasty flesh that's right around each seed.

People make all sorts of things with the flavorful fruits, from puddings to marmalades, from beer and brandy to custard pie.

PEACH AND NECTARINE

Prunus persica

I'll never forget my horticulture professor's description, accompanied by appropriate body language, of a perfectly ripe peach. He stood in the front of the lecture hall in tie and button-down shirt, jutting his chin forward and butt backward in an incongruously undignified manner. That, he said, was the only way to avoid being drenched with the ambrosial juice that unavoidably oozes when you sink your teeth into a dead-ripe peach. Thirty-five years later, some of today's peaches are admittedly flavorful while remaining firmer-fleshed. In any case, a ripe peach is brimming with tangy, sweet peach flavor, very sweet in the case of white peaches. White-and yellow-fleshed peaches can be either clingstone or freestone. Besides adhering to the pits, the flesh of clingstone peaches is firmer than that of freestone peaches. That firmer flesh makes clingstones the choice for canning and cooking. Nectarine is essentially the same fruit as peach (botanically, the same genus and species), differing in a single gene that regulates fuzziness. A bud on a branch of a peach tree might mutate to grow into a stem yielding nectarines and vice versa.

'Honey Babe' peach

YIELD 50 to 150 pounds per tree

USDA COLD HARDINESS ZONES 5–9

AHS HEAT ZONES 9–4

POLLINATION Most are self-fruitful

LUSCIOUS LANDSCAPE INDEX 2 (beautiful blooms, attractive leaves through summer; requires annual pruning and an eye out for pests even in favored regions)

REGIONS OF BEST ADAPTATION Peaches and nectarines have a rather limited optimum range because they need winters cold enough to satisfy their chilling needs yet can't tolerate truly frigid weather. Because of certain disease problems and their habit of blooming very early, peaches and nectarines also need a climate, like that in their native habitat, in which summer humidity is low and temperatures stay reliably warm once spring arrives. The fruit is threatened by plum curculio east of the Rocky Mountains. Put all this together and we find that, as landscape fruits, peaches and nectarines perform most reliably and with the least care in the western portions of the country, especially those with a microclimate less subject to late-spring frosts. That said, I have occasionally seen trees thriving—for a few years, at least—with little or no care in other, less favorable regions. Realize that peach or nectarine growing in such areas is a gamble, with bad odds.

Some peach varieties with low winter chill requirements (that is, adapted to areas with warm winters) are 'Babcock', 'Desertgold', 'Flordagrand', 'Midpride', and 'TropicSweet'. Low-chill nectarines include 'Desert Dawn', 'Desert Delight', 'Rose', 'Pioneer', and 'Silver Lode'.

PLANT SIZE AND GROWTH HABIT A mature peach or nectarine tree is small- to mediumsized, rarely over 10 feet tall and wide, with spreading limbs. So-called genetic dwarf varieties (which are dwarf because of their genes rather than because they are grafted on dwarfing root-stocks) are truly tiny trees, maturing at about 5 feet tall; some varieties reach only 3 feet. The internodes, which are the spaces from leaf to leaf, of these dwarfs are very close together, giving these plants a compact growth habit and tufted appearance. Although pretty in the flower garden or creating a low hedge, the fruit quality of the genetic dwarf varieties is not quite up to snuff.

Peach and nectarine trees are fast growing but not long-lived. Plan on a 10- to 20-year life span.

SEASONS OF VISUAL INTEREST A peach or nectarine tree's bright pink blossoms are an awesome sight in spring, all the more so because they unfold early and open against branches still bare of leaves. The glossy, lance-shaped leaves unfurl later and are quite attractive all summer long as they arch downward with a look reminiscent of bamboo or of large willow leaves.

‘Honey Babe’ peach blossoms

GROWING TIPS Peach and nectarine trees are at their best when bathed in sunlight in perfectly drained soil having near neutral or alkaline pH. Train the young tree to an open-center form using a minimum number of cuts in order not to delay the time before you get to taste the first fruits. Peaches and nectarines also take well to espalier; a “fan” trained against a wall not only looks nice but also, in less than perfect climates, garners extra heat from the wall and is easily draped with a cloth if a later frost threatens.

Peach and nectarine trees require more-severe pruning than do most other fruit trees. Pruning thins the fruits by removing flower buds and thus potential fruits. It also stimulates growth of new shoots, important for regular production because peaches and nectarines bear flowers and fruits only on shoots that grew the previous year. If possible, prune while the tree is in bloom; wounds heal quickest then, minimizing the bark diseases to which these trees are susceptible, and you can identify and remove any stems that suffered damage from winter’s cold. Young trees often grow so vigorously that their interior branches become shaded, in which case cut away some upright shoots in the center of the tree once growth is under way.

Use mostly thinning cuts on a mature tree. Remove vigorous upright growth, thin remaining stems, and occasionally cut back into two- or three-year-old wood. Cut back drooping stems as well as any very short stems—both types typically produce small fruits for lack of sufficient leaves. Prune enough to stimulate 18 to 24 inches of new growth each year (less on dwarfs). When you’re finished pruning a peach or nectarine tree, it should be open enough to let a bird fly through the branches without touching any of them.

Make adjustments in your pruning for differences in growing conditions. Where summers are dry and trees are not irrigated, use severe heading cuts to stimulate rapid growth early in the season, before good growing conditions come to an end. Where water and nutrients are available throughout the growing season, thinning cuts are sufficient.

When fruit set is good, pruning alone does not remove enough of the crop, so thin by hand also. Final fruit spacing should be about 8 inches apart, unless fruits are concentrated on just some stems, in which case fruits can be closer. (About 35 leaves are needed to nourish each fruit to perfection.)

Even in the relatively pest-free—that is, for peaches and nectarines—western states, some pests occasionally cause problems. Oriental fruit moth makes a large hole in the fruit or bores into branches, causing the tips to wilt. Control this pest with pheromones, although they're usually more effective in an orchard than in a backyard environment. Peach tree borer makes holes in the trunk from which exudes a tan, jellylike material. These borers can kill small trees but are attracted mostly to those that have been weakened or damaged, so you know what to do and what not to do. Brown rot is a fungus disease, worse in humid climates, that turns fruit fuzzy, gray, and inedible. The disease gets its start each year from dried up "mummies" (infected fruits) left on the tree or the ground, so clean them up and put them in your compost pile. Two other diseases your tree may encounter: bacterial leaf spot, which marks fruits with small, dark spots and leaves with angular spots and holes; and peach leaf curl, which causes leaves to pucker and turn reddish. Both of these problems are most easily avoided with disease-resistant varieties. Some bacterial spot–resistant peach varieties are 'Biscoe', 'Candor', 'Harbelle', 'Harkin', 'Jayhaven', 'Loring', and 'Redhaven'; 'Hardired', 'Mericrest', and 'Sunmist' are bacterial spot–resistant nectarines. 'Avalon Pride', 'Clayton', 'Frost', and 'Redhaven' are among those that are resistant to peach leaf curl. Genetic dwarfs and nectarines are generally more susceptible to leaf curl than are standard peaches.

NECTARINE VARIETIES

Nectarine varieties are being developed at almost as rapid a pace as are peach varieties. Below is a sampling from several regions and with various desirable characteristics.

'Arctic Glo' This small, white-fleshed nectarine ripens early and has a fantastic flavor, very sweet.

'Fantasia' 'Fantasia' boasts excellent flavor and is widely adapted. The skin is almost solid red and the flesh is clingstone and firm. The fruit is large and late ripening. It's susceptible to brown rot and bacterial leaf spot, however.

'Goldmine' This large, white-fleshed, freestone nectarine has excellent flavor.

'Hardired' This freestone nectarine, bred in Canada, has yellow flesh and good quality. The plant tolerates bacterial spot and brown rot; has large, showy pink flowers; and is very hardy.

'Harko' This is among the more cold-hardy varieties and it's also disease resistant. The skin is solid red and the flesh is yellow and clingstone, with excellent flavor. Harko requires more thinning than most other varieties and a bit more pruning because of twiggy growth.

'Mericrest' This variety, bred in New Hampshire, is one of the hardiest nectarines. The small, freestone fruit has excellent flavor and a dark red skin. The tree is medium-large and productive, and is resistant to brown rot and bacterial leaf spot.

'Panamint' This red-skinned yellow freestone is aromatic and intensely flavored, with a nice balance of tart and sweet. It is a low-chill variety.

'Redgold' This yellow-fleshed, freestone variety bears in midseason, yielding fruits with excellent flavor. The tree is fairly hardy and disease resistant.

'Snow Queen' 'Snow Queen' is a freestone, white-fleshed nectarine with soft flesh.

'Southern Belle' This large, freestone nectarine has yellow flesh. The tree is productive and has a low chilling requirement. At full size, the tree is only 5 feet tall.

‘Stark Gulf Pride’ The ripe fruit of this variety is very firm, with yellow flesh and excellent flavor. The tree has a very low chilling requirement.

PEACH VARIETIES

Breeders develop peach varieties at a rapid pace and these are often specially adapted to specific regions, so also ask your local Cooperative Extension office for suggestions. Below is a sampling from various regions and with various desirable characteristics; no one peach variety grows well everywhere and tastes great.

‘Avalon Pride’ This very flavorful, semi-freestone, yellow-fleshed peach is resistant to peach leaf curl. Productivity can be variable.

‘Babcock’ This early-ripening, freestone variety has white flesh and a tangy sweetness. The skin is light pink with a red blush. Thin the fruits aggressively or they’ll be too small. This is a low-chill variety.

‘Harbelle’ This small, cold-hardy tree is a reliable bearer of yellow, freestone fruits with good flavor. It is resistant to bacterial leaf spot.

‘Loring’ The tree blossoms early and bears large, freestone, yellow-fleshed fruits with very good flavor. Ripe fruits are mostly yellow-skinned. ‘Loring’ is resistant to bacterial leaf spot.

‘O’Henry’ This large, yellow freestone fruit has excellent flavor. It’s best adapted to parts of the southwest.

‘Redhaven’ This widely planted variety has excellent yellow, almost freestone flesh and a yellow skin that’s blushed bright red. It is susceptible to brown rot but resistant to peach leaf curl and bacterial leaf spot.

‘Reliance’ This is the variety to grow in the northernmost reaches of peach growing. This cold-hardy, freestone has soft yellow flesh and good flavor. Make sure to thin the fruits for best flavor and size.

‘Rio Grande’ This low-chill variety bears medium to large yellow freestone fruits with good flavor. The tree is productive and has especially showy blossoms.

‘Saturn’ This variety is a so-called donut peach because of its unique shape. The flesh is white and has a sweet, low-acid, mild flavor that sometimes develops roselike aromatics. The flower buds are very hardy and the tree tends to bear heavily.

‘Summer Pearl’ This large, white freestone peach has a pinkish skin and a very sweet and aromatic flavor. The tree is very vigorous, productive, and not very susceptible to bacterial spot.

A genetic dwarf peach never grows too large, even for a container.

HARVEST, STORAGE, AND USE If you see any green in the background color of a peach or nectarine, don't even consider harvesting it. Once the fruit is fully colored in shades of red and yellow only, check for some softening. Then cup the fruit in your hand and give it a slight upward movement and twist. Take the fruit from the tree only if it parts readily. (Some varieties, such as 'Saturn', are somewhat reluctant to part with the tree when ripe; you may have to give a definite tug.) The final test for any variety is, of course, in the eating.

Handle ripe peaches very gently, because they bruise easily. Chilled immediately, they'll keep for a couple of weeks.

PEAR (EUROPEAN AND ASIAN)

Pyrus communis (European pear); *Pyrus pyrifolia, P. ussuriensis*, and *P.* × *bretschneideri* (Asian pear)

European pears are the most common in American and European markets. They are, well, pear shaped, and generally have a buttery texture (crunchy 'Beurré Bosc' is an exception) with sweet and aromatic flavor. The skin might be yellow red, brown, russeted, or smooth, the russeting more prevalent on pears grown in the eastern United States. Asian pears, also called nashi, apple pears, or salad pears, are more commonly round than pyriform, and have a crisp flesh that explodes with juice in your mouth with each bite. Flavors range from sweet with just a hint of perfume to sweet with a strong, floral aroma. The skin of some Asian pears is smooth and clear yellow; others have skin that is russeted and light brown. Both European and Asian pears have been cultivated for thousands of years and within each type exist thousands of varieties.

REGIONS OF BEST ADAPTATION As far as climate is concerned, pears can be grown almost everywhere in temperate regions experiencing some winter weather. A few pests may be more serious in one region than in others, but pears can be grown without spraying if you keep an eye for potential pests and if you plant pest-resistant varieties.

Asian pear (*Pyrus pyrifolia*)

YIELD 60 to 300 pounds per tree

USDA COLD HARDINESS ZONES Varies with variety, especially for Asian pears, but most kinds of both pears generally do well in Zones 4–9; some are hardy into Zone 3

AHS HEAT ZONES 9–3

POLLINATION Most pears need cross-pollination. A few kinds of European pears, such as 'Magness', don't produce viable pollen, so if you plant this one, you need to have pollen from two other varieties nearby in order to reap fruit from all three varieties. European and Asian pears can pollinate each other only when the blossoming period of the two varieties overlap; Asian pears generally bloom earlier, though.

LUSCIOUS LANDSCAPE INDEX 1 (beautiful in bloom, nice form, can be carefree, luscious fruit in great variety, fruit often showy, nice autumn color of leaves sometimes)

SEASONS OF VISUAL INTEREST

A pear tree is a joyous sight in bloom in spring, each flower bud opening into a cluster of half a dozen or more white blossoms. The trees are also quite pretty when in full leaf because the leaves have a glossy sheen and often remain healthy-looking throughout the growing season. The much larger leaves of Asian pears are especially attractive. Come autumn, leaves of many pear varieties, including many Asian varieties and such Europeans as 'Colmar d'Été', 'Durandeau', and 'Triomphe de Vienne', take on very attractive coloration. Ripening pears among the leaves, especially yellow varieties, also contribute to the show. In winter, the bare branches of a wizened old pear tree—and pear trees can live many decades—are picturesque. You might consider most picturesque the neglected tree with many upright branches and some deadwood. Or you might consider most picturesque the tree whose branches have been coaxed to spread, with dead and diseased wood regularly pruned out. Either tree usually produces a decent crop. The year-round form is highlighted when it is trained as an espalier.

GROWING TIPS To be at their best, pear trees need annual pruning in late winter or early spring. Young trees tend to grow so vigorously that they may be slow in settling down to fruit. Old trees go to the other extreme, often becoming overburdened with too many fruiting spurs—the short, stubby growths on which flowers and fruits are borne—and making insufficient new growth. Counteract these tendencies with minimal pruning of the young tree and more-aggressive pruning of the old tree.

Train the young pear tree as a central leader or as a modified central leader, selecting wide-angled branches and mechanically bending down branches to slow growth and induce earlier fruiting. As the tree matures, the weight of the fruits will keep branches down. Then prune to thin out stems where growth is too dense, mostly high in the tree. Pull off watersprouts—those very vigorous, vertical shoots—as soon as you notice them. Also cut away weak wood, such as spindly stems hanging from the undersides of limbs. Such stems are not very fruitful and the fruits they do bear are of poor quality. If a long limb is drooping, cut it back to a strong side branch or to a point where it is not drooping. When fruiting spurs become too old and crowded to bear well, head and thin them to give them room and to stimulate new growth.

Pruning pears also thins the fruit—but not enough, especially for Asian pears, which tend to be overly productive at the expense of quality. Go over a tree after fruit set and pinch off enough small fruits so that those remaining are spaced 5 inches apart. Because the beginnings of next year's flower buds don't form until some 60 days after the current year's blossoms appear, no need to rush fruit thinning for good return bloom in the year following a bumper crop, but still do it.

Thinning also helps limit damage from codling moths, which lay eggs in the fruits and prefer to do so in fruits touching one another.

Fire blight can be a serious disease, killing branches or even whole trees. Blackened leaves that remain attached to the stem and stem tips curling over in a characteristic "shepherd's crook" make afflicted stems appear to be singed with fire. Fire blight most readily attacks succulent growth, so avoid excessive fertilizer or pruning, both of which can overstimulate a tree into making susceptible growth. Diligent pruning out of infected wood also controls this disease. Sterilize pruning shears in alcohol between cuts made in summer while the bacteria are active, and keep an eye out in winter for dark, sunken fire blight cankers, where the disease-producing bacteria spend the winter. Varieties resistant to fire blight include European types such as 'Magness', 'Maxine', 'Moonglow', and 'Seckel', and Asian types such as 'Seuri', 'Shinko', and 'Ya Li'.

Two other problems can be mistaken for fire blight. The first is *Pseudomonas* blight, a disease common in cool, moist autumn weather. Cankers of this disease do not ooze the slime that fire blight cankers do in spring, but both diseases can be effectively controlled by pruning. Blackened leaves can also be caused by superficial molds growing on honeydew dripped on pear leaves by an insect, the pear psylla, as it feeds. Differentiate between fire blight and this superficial mold by rubbing a leaf; if the black color wipes off, the problem is not fire blight. Horticultural oil sprays and kaolin sprays (commercially called Surround) help keep psylla in check.

PLANT SIZE AND GROWTH HABIT

A full-size pear tree on a "standard" rootstock grows 30 or more feet tall and about two-thirds that width. Pear branches tend to grow very upright. Dwarf rootstocks have been developed, bringing tree height down to about 8 feet tall, with a commensurate reduction in width. I prefer to coax pear trees into a more spreading form for better appearance, limb strength, and production. Age, the weight of fruit, and weights or strings all help those branches to spread.

EUROPEAN PEAR VARIETIES

'Bartlett' This common market pear, a European type (known in Europe as 'Williams' Bon Chrétien'), has a smooth, yellow skin and is delicious when grown, picked, and ripened well. The fruit can be stored for a few months. The tree is productive and reliable. 'Bartlett' cannot cross-pollinate with 'Seckel'.

'Beurre Bosc' This pear has a russet skin, a crisp texture, and a sweet, rich flavor. The fruit keeps two to three months in storage. It's well adapted to northern and western regions but is not very productive. It is susceptible to fire blight.

'Comice' A European pear, 'Comice' is considered by many to be the best flavored of all pears. The fruit is large and late ripening, and has a greenish yellow skin, slightly blushed and russeted. Store at least a month before ripening it for eating. Production is somewhat erratic and, as it is not widely adapted, this variety is at its best in the West.

'Harrow Delight' This variety is early ripening, with medium-sized fruits of high quality. The tree is resistant to fire blight.

'Magness' This pear, with 'Comice' in its lineage, ranks very high for flavor and for resistance to fire blight. The fruit is sweet, juicy, and soft, with a greenish yellow skin having dark spots and

light russet. ‘Magness’ is slow to come into bearing and cannot pollinate other pears. It does well in many areas.

‘Seckel’ This small pear has an excellent, sweet, spicy flavor. It bears regularly and is resistant to fire blight disease.

‘Warren’ This excellent-quality pear variety is highly resistant to fire blight. The fruits are medium to large with a long neck and pale green skin sometimes blushed red. The flesh is smooth, juicy, and buttery. ‘Warren’ keeps well and needs only 600 chill hours.

‘Aurora’ pear (*Pyrus communis*)

ASIAN PEAR VARIETIES

‘Chojuro’ This variety has a strong flavor relished by some people but not by others (I like it). The skin is slightly astringent. The fruit stores for about five months.

‘Hosui’ This golden brown Asian pear has a sweet, rich flavor and stores well. The fruit is round. The tree is a strong grower with a somewhat weeping form.

‘Korean Giant’ (‘Olympic’) This variety has a russet skin with a slight orange blush. It ripens very late in the season to an excellent flavor that hints of butterscotch. The tree is very resistant to fire blight.

‘Kosui’ ‘Kosui’ grows as a vigorous tree bearing fruits that are small and flat with tender, bronze, russeted skin. ‘Kosui’ is sweet, ripens early, and stores moderately well.

‘Seuri’ The tree is very productive, bearing fruits that are perhaps the largest of all Asian pears. The pleasant flavor hints of walnut. The fruits ripen late but don’t keep well.

‘Ya Li’ (‘Duckbill Pear’) This old Chinese variety is very productive but slow to come into bearing. The late-ripening fruits are pear-shaped, sweet, and aromatic. ‘Ya Li’ is a low-chill variety that keeps well.

HARVEST, STORAGE, AND USE European pears, except for ‘Seckel’, are among those few fruits that must be harvested underripe, then allowed to ripen off the tree. They ripen from the inside out, so if you leave them to ripen on the tree, the inside will be brown mush at harvest.

Harvest Asian pears at full ripeness, which will not happen to all the fruits on the tree at the same time. That’s okay, because the still-ripening fruits look pretty hanging from the branches.

Don’t rush the harvest because flavor can really soar in those last few days of ripening.

Both types of pears signal that they’re ready for harvest with a slight color change to a lighter green. And then, when you give a fruit a slight upward and twisting motion, its stem should—if it’s ready to pick—part easily and cleanly from the branch. Early-ripening European pears need to be stored under refrigeration for two to three weeks before they can be taken out to ripen. Late-ripening European pears can start ripening off the tree as soon as they’re picked. There is a definite skill in harvesting a European pear at the right moment and then ripening it to perfection, ideally in a cool (60°f) room. The eating quality of a European pear left too long on the tree might be described as “sleepy”; picked too early, the pear is “grassy.” The pear is ripe and ready to eat when the flesh near the stem end gives slightly when pressed with a finger.

Storage longevity depends on the variety, for both European and Asian pears. For long storage of European types, keep them refrigerated and underripe rather than ripening and then refrigerating them. The longest-keeping varieties of European (the later-ripening ones) and Asian pears will hold well for many months.

‘Seckel’ pear in the landscape

PERSIMMON

Diospyros kaki (Oriental persimmon, or kaki), *D. virginiana* (American persimmon)

Persimmons look very much like tomatoes and, like them, the fruits might be round, lobed, flattened, or pointed and in various shades of red to orange ("persimmon orange," of course) to yellow. This variability refers mostly to kaki (Oriental persimmons), which are usually the size of a medium-sized tomato. American persimmons are usually persimmon orange in color, roundish, and the size of a large cherry tomato. Although some kakis can be eaten crisp, most persimmons have a smooth, jelly-like texture, a honeylike sweetness, and a richness akin to apricot. Some varieties are so soft that they're almost like liquid within the skin. American persimmons are softer and drier than kakis, with richer flavor, something like wet, dried apricots that have been drizzled with honey and given a dash of spice. The botanical name, *Diospyros*, means "fruit of the gods."

'Szukis' persimmon

YIELD 40 to 400 pounds, the lesser amounts from American persimmon

USDA COLD HARDINESS ZONES 7–10 for kaki (Zone 6 for few varieties); 4–10 for American persimmon

AHS HEAT ZONES 10–7 for kaki; 9–4 for American persimmon

POLLINATION Some persimmons need cross-pollination, while others do not. Pollen might come

from a separate male tree or from occasional male flowers produced on a mostly female tree. Pollination changes the fruit characteristics of some kakis.

LUSCIOUS LANDSCAPE INDEX 1 (beautiful tree all summer, decorative fruit in autumn, decorative bark in winter, few pests, widely adapted, little or no pruning needed, delectable fruit)

REGIONS OF BEST ADAPTATION Some sort of persimmon can be grown almost everywhere except in tropical and the very coldest regions. Summers may not be long and hot enough to ripen the fruits in the Pacific Northwest and coastal New England even though the trees themselves can survive and grow there.

PLANT SIZE AND GROWTH HABIT Kaki grows to become a medium-sized tree. American persimmon is a medium- to large-sized tree, as tall as 75 feet in warmer regions and less than half that in colder parts of its growing range.

SEASONS OF VISUAL INTEREST Oddly, for a fruit tree, persimmon is most innocuous in spring, and that's because it's one of the last trees to begin growth and because its pale green blossoms are hardly noticeable. While all other trees are bursting into bloom, persimmon remains just a skeleton of bare branches. Once the leaves unfold, though, the tree is a joy to behold. The leaves have a slightly bluish cast, droop languidly, and look as fresh in August as they do when they unfold in spring. In late summer, things liven up as the colorful fruits begin ripening among the leaves and then the leaves turn golden yellow before dropping. With many varieties, the brightly colored fruits remain pressed to the branches like Christmas ornaments for weeks. With leaves and fruit gone in winter, the bark—in blocky plates much like alligator hide—becomes more engaging. Persimmon is perfect as a specimen tree as long as it's planted where eventually falling fruits won't make a mess.

GROWING TIPS The secret to growing a persimmon whose fruit you'll enjoy is to plant one that tastes good and is adapted to your area. Many wild or seedling American persimmon trees never develop good flavor, so plant a named variety and, if you live where the growing season lacks warmth or length, make sure that it's one that will ripen within your growing season. With kakis, nonastringent varieties (see below) are adapted only to areas with hot summers.

Persimmon trees are a little more difficult to transplant than most other fruit trees, so buy from a reputable nursery and be careful to minimize root disturbance. Don't be surprised to see black roots; they may look dead but that's their normal color. Give a persimmon tree a site in full sun with well-drained soil. Coddle the tree with timely watering during its first season.

Persimmon wood is weak, making it important to train young trees to a sturdy framework of either open-center or modified-central-leader form. New growth that is very long and willowy will need to be supported or shortened. Some trees go to the opposite extreme, fruiting too heavily at too young an age so that they become runts. Prevent such trees from channeling all their energy into fruit production at the expense of shoot growth by removing fruits early in the season.

Kakis benefit from occasional pruning to keep the branches open to light and air and to stimulate

some new growth that will bear fruit the following season. American persimmons are somewhat self-pruning, naturally dropping some stems that have borne fruits.

HARVEST, STORAGE, AND USE *Don't eat a persimmon that is unripe.* As Captain John Smith (of Jamestown colony fame) said, if a persimmon "is not ripe it will draw a man's mouth awrie with much torment." For American persimmons, this means you should wait until the fruit becomes very soft on the tree, when the skin is almost translucent. At this point, the fruit usually separates readily from its green calyx "cap." Use these same guidelines in harvesting astringent kaki varieties. Pick fruits of nonastringent kakis when they're fully colored and still firm.

Astringent kakis can also be picked underripe but fully colored, then ripened off the tree. Ripening occurs if you just let the fruits sit on a counter, or you can speed things up by enclosing them in a bag with a ripe apple (the apple gives off ethylene gas, which hastens ripening) or a little whiskey or other source of ethanol. Drying also ripens the fruits, as well as preserves them for winter. PCA varieties are best for this purpose. In Japan, fruits for drying are peeled and then massaged repeatedly while drying to improve the texture and bring out a sugary coating. (Some American persimmons, such as 'Szukis', dry by themselves if left hanging on the tree, making an ugly but tasty dried fruit.)

Other ways to preserve persimmons, American or kaki, are to freeze them or, ending with quite a different final product, to ferment them. The Chinese have fermented kakis into vinegar and brandy, and Native Americans made an alcoholic beverage from persimmons and honey locust pods. In the American South persimmons, mashed with cornmeal, were brewed into "'simmon beer."

AMERICAN PERSIMMON VARIETIES

'Garretson' This variety does not need pollination and has a clear, orange flesh that is delicious and freezes well.

'George' This is a male variety.

'John Rick' This precocious variety bears large fruits with red pulp that is delicious fresh and also good frozen or cooked. It needs pollination.

'Killen' This fruiting variety occasionally bears male flowers. The fruits are large and prolific, and have excellent flavor.

'Meader' This variety is one of the most cold-hardy. It bears occasional male flowers and doesn't need a pollinator. The fruit ripens early, but loses its astringency slowly, or not completely, and is of average quality.

'Mohler' This variety is very early ripening and of very high quality. The sweet fruits are up to 2 inches across and have a pale orange skin. They drop as they ripen. 'Mohler' may not need pollination. I recommend it for cold regions.

'Morris Burton' This variety won first prize at the 1957 Persimmon Festival in Mitchell, Indiana. The tree is slow to bear. The fruits are small and reddish orange, with few seeds. Tender skin and a honeylike flavor make this one of the most delicious persimmons. It needs pollination.

'Szukis' This variety is extremely cold-hardy and prolific, bearing fruit without pollination.

The fruit ripens early with clear, orange-colored skin that encloses a delectable flesh that is sweet, rich, and without astringency. The fruits are 1½ inches across and most of them cling to the tree after ripening, well after the leaves fall. I recommend it for cold regions.

'Yates' This early-ripening variety is good for northern regions. The fruits are large and seedless and boast good flavor. This variety does not need pollination.

KAKI VARIETIES

Kakis have been cultivated in the Orient for centuries and more than 2,000 varieties exist. They can be categorized into those bearing astringent fruits (astringent until they are ripe, that is) and those bearing nonastringent fruits. Within each of these categories are varieties whose fruits are influenced by pollination ("pollination variant") and those whose fruits are unaffected by pollination ("pollination constant"). The flesh color of pollination-variant astringent kakis (PVA) darkens when those fruits are pollinated. The flesh color of pollination-constant astringent (PCA) varieties is not influenced by pollination.

A nonastringent kaki can be eaten when it is as crisp as an apple. Pollination-constant nonastringent (PCNA) kakis are always edible when still firm; pollination-variant nonastringent (PVNA) kakis are edible when firm only if they have been pollinated.

'Eureka' PCA. The round, medium-large fruits are deep red and of excellent quality.

'Fuyu' ('Fuyugaki') PCNA. This commercial variety bears better if pollinated. The large, orangish red fruits have an excellent flavor. This variety seems to be different from the Japanese variety with the same name.

'Giboshi' ('Smiths Best') PVA. Giboshi is one of the most cold-hardy kakis. It needs pollination for best yield. The delicious fruit is shaped like a top, and when seeded is the color of chocolate.

'Hachiya' PCA. This commercial variety bears large, conical, orange-red fruits with an almost transparent skin and an excellent, honey-sweet flavor.

'Jiro' PCNA. The fruit is large, crimson-yellow, flattened, and squarish from the four shallow indentations in its side. The flesh is juicy and crisp to tender. You'll sometimes find it sold as 'Fuyu'.

'Kyungsun Ban-Si' PCA. This variety needs pollination to set fruits, which then are up to 3 inches across, orange, with good flavor.

'Lantern' 'Lantern' is a male pollinator that also bears some fruit, albeit of poor quality.

'Saijo' ('Very Best One') PCA. The small, yellowish orange fruits are very sweet.

'Sheng' ('Etter') PCA. Fruits of this variety are yellow and flattened, with lobes. Their flavor is delicious. This is among the more cold-hardy kakis.

'Tecumseh' PCA. This variety has good fall color. The yellow, square-lobed fruits are of good quality.

'Tsurunko' ('Child of the Stork', 'Chocolate Persimmon') PVNA. This variety produces many male flowers. The fruits are medium to small and cylindrical with orange-red skin over a dark brown flesh. The flavor is sweet and rich. (Other varieties are called "chocolate persimmon" as well.)

PLUM

Prunus domestica (European plum), *P. salicina* (Oriental plum); also hybrids involving American species such as *P. americana* and *P. besseyei* with *P. salicina* or another Asian species—or some of these species mixed together!

There are a few basic kinds of plums and they differ in some basic characteristics. First are European plums, which complicate things by being further divided into four types. Two of these four are most worth growing for great fresh flavor: Prune plums, which are very sweet, dark blue, and oval; and 'Reine Claude' ('Green Gage') plums, which are very sweet, roundish, and yellow-green. And then there are Oriental plums, large, round, and juicy and yellow, red, or purple. Oriental plums tend to be less sweet than European plums. And finally come Japanese-American hybrid plums, a hodgepodge that includes crosses involving species native to North America. The resulting fruits are generally smallish and have an array of flavors, some sweet, some tart, some spicy, some sweet with a tart skin.

YIELD 75 pounds per tree

USDA COLD HARDINESS ZONES 4–8 for European plums; 6–10 for Oriental plums; variable for hybrids

AHS HEAT ZONES 8–3 for European plums; 9–3 for Oriental plums; 8–2 for American hybrids

POLLINATION European plums are generally self-fruitful but often fruit better with pollination from another variety of European plum. Oriental plums need cross-pollination from another Oriental plum variety or from a hybrid. A hybrid American plum needs pollination from one of the American species from which it was derived. 'Toka' and 'South Dakota' are American hybrids that produce abundant pollen.

LUSCIOUS LANDSCAPE INDEX 3 (beautiful and fragrant blossoms and delicious fruit; requires annual pruning and has pest problems in many regions)

‘Romeo’ plum (*Prunus salicina* ‘Romeo’)

‘Yellow Petite’ plum

REGIONS OF BEST ADAPTATION
Plums are less susceptible to disease problems in less humid climates, making chances for success greatest in western parts of the united States. A major insect pest, plum curculio, also is rare west of the Rocky Mountains. Where cold or insect and disease pests threaten plums, the ones to grow are the Japanese-American hybrids or even the pure American species. Oriental plums bloom earliest, so are best planted where late-spring frosts present the least hazard.

PLANT SIZE AND GROWTH HABIT All these different plums grow to become small- to medium-sized trees, more or less. Japanese and European plums are more treelike than the Japanese-American hybrids and the American species, both of which tend to be shrubby. Generally, no plum trees are very long-lived.

SEASONS OF VISUAL INTEREST Plums are spectacular in spring as they burst into a profusion of white blossoms that perfume the air with a fragrance reminiscent of Oriental incense. There’s not much to look at after bloom time unless you have a so-called purple-leaf plum tree. Purple-leaf plums represent yet another species, *P. cerasifera* (cherry plum or myrobalan), which produces small fruits of usually only fair quality.

GROWING TIPS Give a plum tree full sun and good soil, and train it in its youth to an open-center shape to make sure all branches will always be bathed in light and air. The bushy hybrids may not require training. Prune mostly to let light into the center of the tree and to coax a moderate amount of new growth for the following year's fruit.

European plums fruit year after year on spurs, which are short growths, so they need only light pruning. Japanese plums fruit on one-year-old stems in addition to spurs, so they need more-aggressive pruning. A good crop of the large fruits can be heavy enough to break limbs. Lighten the fruit load and bring fruit closer to the trunk by shortening branches threatened by a heavy crop. Also prune enough to stimulate growth of new shoots that will be one year old the following season and bear part of the crop.

Generally, plum fruits do not need to be thinned. One exception is with Japanese plums: If the crop is heavy, hand-thin the fruits so they're 5 inches apart.

Plums are relatively pest-free in western states, but even there occasional problems can arise. Brown rot is a fungus disease, worst when humidity is high, that turns fruit fuzzy, gray, and inedible. The disease gets its start each year from dried up "mummies" (infected fruits) left on the tree or the ground, so clean up those mummies and put them in the compost pile. Some of the other plum diseases can be avoided by planting resistant varieties. Bacterial leaf spot, which causes brown, sunken pits in fruits, and plum leaf scald, which stunts or kills trees, are prevalent in the Southeast, but varieties such as 'AU-Amber' and 'AU-Rosa' are resistant. That tarry mass you sometimes see on a plum tree is black knot disease; prune it away or plant resistant varieties such as 'AU-Amber', 'AU-Roadside', 'AU-Rosa', 'Crimson', 'Fellenberg', 'Santa Rosa', and 'Shiro'.

VARIETIES

'AU-Roadside' The fruits of this Oriental-type plum are small to mediumsized, soft, and dark red with excellent flavor. The plant is resistant to disease.

'Bluefre' Fruit of this variety of European prune plum is large, blue, and firm. The fruits hang well on the tree even after they're ripe. The tree has an upright growth habit.

'Green Gage' ('Reine Claude') This old variety of European plum has heart-shaped fruit with a green skin and a rich, sweet, juicy, amber flesh. The tree is productive.

'Methley' An Oriental plum, 'Methley' is small to medium-sized and red, and has excellent flavor. The fruits ripen over a long season and the tree is relatively hardy for an Oriental plum.

'Monitor' This hybrid plum has medium-large, bronze fruits of good quality. Rain during ripening may cause the fruit to crack. The plant is very cold-hardy, productive, and vigorous.

'Mount Royal' Fruits of this European variety of prune plum are dark blue and medium-sized. The plant is very hardy.

'Ozark Premier' This Oriental plum is disease resistant and relatively hardy, so it's adapted to many regions. The fruits are very large and red, with a juicy, tart, yellow flesh.

'Pipestone' This hardy hybrid plum bears large fruit with a red skin and yellow flesh. The skin is tough but peels easily. The flesh is somewhat stringy, but it's juicy with excellent flavor. This variety is pollen-sterile, so it can't pollinate itself or other plums.

'Santa Rosa' This Oriental plum is medium to large, purplish red, and sweet, juicy, and

aromatic. The flesh remains tart near the pit. This commercial variety does poorly in the Southeast.

'Shiro' This juicy, flavorful Oriental plum is medium to large and has yellow skin and flesh.

'Stanley' This European type of prune plum is similar to the variety Italian (often sold in markets) except that Stanley ripens earlier and is more productive and widely adapted. The fruit is large, with a blue skin and delicious yellow flesh.

'Superior' This hybrid variety bears early, large red fruits that are tender, juicy, and very sweet. Fruits of this variety require thinning. The plants are precocious and productive.

'Toka' Fruits of this hybrid plum are large, pointed, and the color of an apricot. The yellow flesh has a rich, spicy flavor. Toka is a good pollinator for many other hybrid varieties.

HARVEST, STORAGE, AND USE For best quality, harvest plums when they feel slightly soft to the touch, have fully developed whatever their ripe color will become, and part readily from the stems when given a slight twist. Except for late-ripening varieties, all the plums on a single tree will ripen at about the same time. Eat them right then and there or store them, refrigerated, for no more than a few days.

Plums also make nice jams and pies. If you have a dehydrator or live in a dry climate, dry excess fruits—and the varieties to dry, of course, are the European prune plum types.

'Stanley' plum

QUINCE

Cydonia oblonga

Quince is a relative of apple and looks much like an apple—a very muscular 'Golden Delicious' apple. The skin is golden yellow and covered with a peachlike fuzz. Quinces have a spicy, applelike flavor that is generally too tart, astringent, and dry to enjoy fresh. However, "it is said that in Persia and in the Near East it grows to such perfection that some varieties are esteemed when eaten raw" (L. H. Bailey, *The Standard Cyclopedia of Horticulture*, 1927).

Don't confuse this quince with the flowering quince, *Chaenomeles japonica*, or the Chinese quince, *Pseudocydonia sinensis*, both fine ornamentals but not included in this book because their fruits take too much doctoring in order to render them palatable.

YIELD 75 pounds per plant

USDA COLD HARDINESS ZONES 5–9

AHS HEAT ZONES 9–3

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 2 (plant has beautiful form and flowers, attractive fruits; benefits from regular pruning, fruit usually must be cooked before being eaten, and pests are sometimes a problem)

REGIONS OF BEST ADAPTATION As a relative of apple, quince shares some of the same insect and disease problems, all of which tend to be worse in the eastern half of the United States. Quince is worth a try everywhere, though, because it's not nearly as appealing to insects as are apples, and diseases can be kept to a minimum with the combination of a good site and good care.

Quince

PLANT SIZE AND GROWTH HABIT Quince grows as a small, spreading tree, often with more than one trunk, or as a large shrub, in either case rarely more than about 10 feet high and two-thirds that width. Especially when trained to have a single trunk, the plant becomes gnarled, twisted, and picturesque with age, some of the best examples of which are the four quinces that create focal points at each of the quadrants of the medieval Cloisters garden in New York City. Beneath these small trees grow medieval herbs, each bed delineated by a low wattle fence.

SEASONS OF VISUAL INTEREST Given age and a little direction in expressing its character, the form of a quince tree carries the plant visually through the year. But that's not all. In spring, branches are festooned with large white or pinkish blossoms, each resembling a "single" rose blossom. The flowers open relatively late, so they're rarely nipped by late frosts and, because shoot growth is already under way, the flowers are highlighted by a contrasting backdrop of leafy greenery. In late summer and autumn, the show is quite dramatic from the large yellow fruits, which can be left dangling on the stems for many weeks.

GROWING TIPS Avoid disease problems by choosing a good site for planting. That site should be bathed in full sunlight and, underfoot, the soil should be well drained, not at all sodden.

During the plant's first season, decide whether you want it to become a shrub or a tree of one,

two, or three trunks. Prune accordingly, removing excess shoots while they're still young. Either way, shape the plant in its youth with a permanent framework of spreading limbs that will be exposed to abundant sunlight and air. Once the plant has been shaped and is mature, prune periodically to keep the center open and to remove dead and diseased wood.

Fire blight can be a serious disease problem, serious enough to kill a plant. Symptoms are blackened leaves, which remain attached to the plant, and the bending over in a shepherd's crook of the tips of new growth. Succulent growth is most susceptible to fire blight, so don't spur such growth by pruning or fertilizing too heavily. You can control the disease by looking over your plant regularly and pruning off any branch 6 inches below evidence of disease. Sterilize the pruning shears by dipping them in alcohol between cuts.

For the best-quality fruits, make sure the tree or bush does not suffer from lack of moisture, especially toward the end of the growing season, as fruits are ripening.

VARIETIES

'Aromatnaya' This variety has a pineapple-like flavor, is sweet enough to eat fresh, and is disease resistant.

'Champion' 'Champion' bears heavy crops of large, roundish to pear-shaped, greenish yellow fruits of delicate flavor. The flesh is tender, yellow, and only slightly astringent.

'Orange' ('Apple') The fruit is large to very large (sometimes more than a pound), round, smooth skinned, and bright yellow. The tender flesh is yellow-orange and turns red when cooked, with excellent flavor. 'Orange' is a good variety where summers stay cool.

'Pineapple' This variety bears large, round, golden fruits with very fragrant, tender white flesh with only slight astringency. It's named for the pineapple-like flavor it imparts to jelly.

'Smyrna' This old variety, from Turkey, bears very large, pear-shaped fruits with a golden yellow skin and a light yellow flesh. The flesh is mild, tender, and of excellent quality. The tree has unusually large leaves.

HARVEST, STORAGE, AND USE Pick quinces late in the season, when the fruits are fully colored and fragrant. Frost will not harm them. Ripe fruits should separate readily from the stem, which, incidentally, grows right up to the fruit without any fruit stalk to speak of. Handle the fruits carefully. Although they are hard, they bruise easily. You can store quinces in the refrigerator for up to two months.

Certain varieties of quince are eaten raw, but more usually quinces are stewed with water, added to apple pie for pizzazz, or used for their flavor and pectin in jellies.

RAISIN TREE

Hovenia dulcis

Raisin tree in the landscape

REGIONS OF BEST ADAPTATION The only limitation beyond a winter cold tolerance and requirement is that summers must be long and hot enough to ripen the fruits. Cool-summer regions also delay blossoming so long as to nix the possibility of fruit ripening.

Raisin tree yields a fruit that is very unusual for two reasons. First, you don't really eat the fruit, which is pea-sized and hard. Second, you do eat the fruit stalk, which when ripe becomes all swollen and gnarly. That stalk is not much to look at but tastes sweet, something like candied walnuts or Asian pear.

YIELD 5 to 10 pounds per plant

USDA COLD HARDINESS ZONES 6–10

AHS HEAT ZONES 8–4

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (attractive tree, nice in bloom, tasty fruit, low maintenance; fruit interesting and tasty but not among the most delectable, and tree pretty but not strikingly so)

PLANT SIZE AND GROWTH HABIT Raisin tree can grow to become quite large, as high as 70 feet with a width about two-thirds that height. In form, the tree is similar to the American basswood (linden), upright-oval to rounded.

SEASONS OF VISUAL INTEREST Raisin tree blooms in early summer, the flowers welcome during that lull when the blossoms of many other flowering trees and shrubs are past or still to come. The blossoms are individually insignificant but arrive in such profusion that they turn the tree into a frothing, creamy white mass. The leaves are rounded, tapering to a point at their distal ends, and stay glossy and green all summer long. With age, the smooth bark separates into vertical strips to reveal a reddish interior that makes a pleasant contrast with the grayish brown outer bark.

This tree is demure, so don't use it as a focal point. Nestle it together with other trees and shrubs to contribute to the general mass of greenery along, for instance, the border of a property or the edge of a field.

GROWING TIPS Raisin tree tolerates all sorts of growing conditions with the exception of soggy soil. In the wild, it grows in partial shade but fruits ripen sooner and are probably borne more copiously in full sun. The tree requires essentially no care.

Raisin tree

VARIETIES No varieties exist. The tree is propagated from seed, so plants will vary to some degree in characteristics. Cold-hardiness probably varies with seed provenance.

HARVEST, STORAGE, AND USE Don’t rush to harvest raisin tree because until the fruit stalks are ripe, they taste just like the stalks of any other fruit. Harvesting in quantity can be problematic and hazardous for this potentially large tree whose fruits form at the very ends of its branches. One approach is to lop off branches, then harvest from terra firma.

ROSE HIP

Rosa spp.

Rose hips are the fruits of the rose, any rose. The best rose hips for eating are those that are large and fleshy. These are about an inch across or long; some shade of red; and enclose a cavity containing a number of hard, somewhat hairy, inedible seeds. (Those "seeds" are the true fruits, botanically called achenes.) Ripe, the flesh is soft with a smooth flavor vaguely reminiscent of winter squash with a refreshing dash of lemon.

NOTE: I've singled out six species of rose well suited to the needs of luscious landscaping: *Rosa acicularis*(prickly rose), *R. canina* (dog rose) ,*R. eglanteria*(sweetbriar) ,*R. moyesii, R. rugosa*(rugosa rose, Japanese rose) , and *R. villosa*(also designated *R. pomifera*, apple rose).

YIELD 4 pounds per plant

USDA COLD HARDINESS ZONES 2–9 for *Rosa acicularis* (prickly rose)*;* 3–10 for *R. canina* (dog rose) *;* 4–10 for *R. eglanteria* (sweetbriar) *;* 5–10 for *R. moyesii,* 3–10 for *R. rugosa* (rugosa rose, Japanese rose) *;* 5-10 for *R. villosa*

AHS HEAT ZONES 9–1

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (beautiful flowers, attractive hips and, in some cases, leaves, low maintenance; fruit is not luscious enough to warrant a higher rating)

REGIONS OF BEST ADAPTATION All of the roses listed are widely adapted

VARIETIES See the few extant or recommended varieties above with the following descriptive listing for each species.

Rugose rose hips (*Rosa rugosa*)

APPEARANCE For the purposes of luscious landscaping, a rose species must have fairly large hips and be disease resistant and attractive. Except where noted, there is only one bloom period each season and the flowers are "single" (have one or two rows of five petals). Because each of the six species I've highlighted differs from the others in a number of characteristics, I've listed each species and its characteristics separately. Note that these are "species" roses for which, in some cases, no varieties exist. In the absence of rigorous pruning, they're informal plants, at their best billowing down slopes too steep to mow, clambering up against walls, or surrounded by blowsy perennial flowers next to other informal shrubs. Pay attention to siting the thornier sorts so that they pose no danger to passersby. All these roses are obviously at their best visually in late spring when in bloom and then again in late summer and fall with their colorful hips. With their healthy leaves, these roses look attractive all summer; *R. rugosa* goes one better, blooming continuously through summer. All these roses are full-bodied shrubs, lacking the stiff formality of the more familiar hybrid tea roses.

***Rosa acicularis* (prickly rose)** This lax bush grows up to 6 feet tall and 4 feet wide and has grayish green leaves and dense, bristly stems. The blossoms are bright pink, 2 inches across, and borne singly. The hips are orange and pear-shaped.

***R. canina* (dog rose)** The bush has scented leaves and strong, arching branches reaching 10 or more feet long. The variety 'Inermis' lacks thorns. The flowers are pale pink, 2 inches across, and borne in small clusters. The hips are orange red.

***R. eglanteria* (sweetbriar)** This bush is vigorous and upright, to 10 feet, and very thorny; the small leaves are bright green and, when young, exude the fragrance of green apples when bruised. The flowers are light pink, an inch to 1½ inches across, fragrant, and borne singly or in clusters of two or three. The hips are bright red and oval.

R. moyesii This bush has treelike canes that can reach 10 feet high and wide, along which are scattered short, straight, yellowish prickles; the leaves are dark green, ferny and made up of seven to 13 small leaflets. The flowers are wine red (light pink on some plants), 2 inches across, and borne singly or in twos. The fruits are spectacular, brilliant red urns hanging from the branches in abundance. The variety 'Geranium' is slightly more compact than the species and has larger leaves and hips.

R. rugosa This salt-tolerant bush, which spreads slowly underground, grows about 5 feet high and has bright green, crinkled leaves and many prickles. The flowers are about 3 inches across, very fragrant, and usually pink and single, although some varieties bear white or double flowers. The double-flowered varieties are usually less fruitful. Flowers are borne continuously all season long. The hips are an inch across, round, and orangered. 'Frau Dagmar Hastrup' is particularly recommended, a compact variety bearing pale pink flowers and plenty of hips and showing good autumn color in its leaves.

R. villosa This 6-foot-high species is very upright and has grayish, downy, scented leaves and occasional thorns. The pink flowers are 2 inches across, fragrant, and borne singly or in small clusters. The hips are round, crimson, an inch across, and bristly.

***Rosa rugosa* in bloom**

GROWING TIPS In contrast to the much more commonly grown hybrid tea roses, these roses are low maintenance (so much so that rugose rose, at least, is considered invasive in some regions). They should not need any of the rigorous disease control and pruning that hybrid teas demand. Insects, such as Japanese beetles, are sometimes a problem (as they are on many other plants) but can usually be ignored with no great ill effect. These roses are at their best in average garden soil and full sun.

The roses listed here are "shrub" roses that require only moderate amounts of pruning to look their best. Prune just before growth begins, taking out at ground level some of the oldest, decrepit stems and shortening any that arch to the ground or just look too long, diseased, or out of place.

Ignore any previous instruction that you may have heard about deadheading roses. First of all, most of these roses blossom only once a season, so deadheading will not prolong the bloom. (And *R. rugosa*, which does bloom all season long, does so readily even without deadheading.) And second, deadheading prevents seed and fruit formation, and fruits are one of the things you want from these plants!

Rosa moyesii

HARVEST, STORAGE, AND USE Harvest rose hips when they're fully colored. Raw, the fruits are a nice nibble, especially the fruits of *R. rugosa*, as long as you avoid the seeds. For processing, many people cut or break the fruits in half and then scoop out the seeds before cooking the fruits in water. You're going to strain the cooked pulp anyway, so you could instead cook the pulp with the seeds and then remove the seeds when straining.

Rose hips have a pleasant, slightly tart flavor and are extremely rich in vitamin C. The fruits can be dried for tea or the cooked pulp can be made into jams and soup, the latter a Scandinavian favorite. For soup, sweeten the pulp after forcing it through a sieve and diluting to taste, then serve

either hot with sour cream or cold with whipped cream. Cinnamon and dried fruits are a nice addition. An old recipe for jam starts with cooking 4 quarts of the de-seeded hips in 1 cup of water for about 20 minutes, then pressing or straining the pulp and adding 3½ cups of sugar. Cook the mixture until suitably thickened before pouring it into sterilized jars.

Rosa canina

RUSSIAN OLIVE

Elaeagnus angustifolia; the red-fruited Russian olive is *E. angustifolia* var. *orientalis*

Russian olive hedge

Russian olive fruits are mealy, sweet, and about half an inch long, and usually go unnoticed because the silvery yellow fruits visually dissolve among the plant's similarly colored leaves. Each fruit contains a single seed. A red-fruited botanical variety—sometimes called 'King Red' or Trebizond date—is enjoyed, dried, in western Asia. The dried fruit has a loose skin that peels away to a expose a cream-colored, almost dusty, sweet pulp that practically melts in your mouth like confectioner's sugar.

YIELD 20 pounds per plant

USDA COLD HARDINESS ZONES 2–7 ('King Red' is less cold tolerant)

AHS HEAT ZONES 8–2

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (beautiful form, beautiful bark, beautiful leaves, fragrant blossoms, beautiful fruit if 'King Red', no serious insect or disease problems, low maintenance; fruit is not tasty enough to warrant a higher rating)

REGIONS OF BEST ADAPTATION Russian olive is capable of growing almost everywhere but is at its best in drier climates. It's so adaptable, in fact, that it's listed in many regions as an invasive plant. Take note! The 'King Red' variety seems especially not to like the humidity in the eastern part of

the country. The plants collapse, dead, their first season.

PLANT SIZE AND GROWTH HABIT Russian olive grows to become a mediumsized tree about 30 feet high and almost as wide. The trunk is picturesque, typically bifurcating near ground level and twisting as it grows, and the branches are heavily armed with long thorns. With multiple trunks, the plant can be grown as a large shrub or hedge. My preference is to use the tree as a specimen plant where its form, especially with light pruning in its youth, can be highlighted.

GROWING TIPS Russian olive will tolerate dry, salty, or alkaline soils. It also tolerates very infertile soils because its roots form a symbiotic relationship with a microorganism that gathers nitrogen for it from the air. Russian olive does, however, require good drainage, a soil pH greater than 6.0, and full sun.

This tree does not absolutely require any pruning; I do just a little to restrict it to a couple of trunks rather than let it become shrubbier. One or more of the trunks frequently travels along the ground a bit before turning skyward, which looks nice and may even stabilize the tree against wind. (Trying to capture the look of a one-tree olive grove, I removed one of the trunks, the initially horizontal one, then almost a foot across, from my tree; this otherwise wind-resistant species blew over.) With even more pruning, I have seen a plant look downright formal, trained as it was to a single upright trunk.

SEASONS OF VISUAL INTEREST

In spring, Russian olive bursts into pale yellow blossoms that are individually unremarkable but taken together clothe the plant in a fragrant, pale yellow mist. The leaves are willowy and silvery green, especially nice against the backdrop of a dark wall or evergreen. The overall texture of the plant in leaf is fine to medium. In late summer and autumn, scarlet fruits of the ‘King Red’ variety light up against the silvery foliage. Once the leaves drop, the bark and attractive form can be best appreciated. The bark shreds in dark brown strips and the trunk or trunks contort as if old and wizened.

VARIETIES ‘King Red’ is pretty much the only one available and, in fact, it’s not a clone but rather a seed-propagated variety that originated with some plants brought to the United States from Afghanistan in 1958. Russian olives do come relatively true from seed.

HARVEST, STORAGE, AND USE No need to rush in harvesting Russian olive. Even slightly underripe, the fruits are quite astringent, so let them get truly ripe if destined for fresh eating. In dry climates, the flesh within fruits left hanging on the branches starts to dry; the skin retains its shape to contain the drying flesh, so in those climates you can pick the fruit at your leisure.

SEABERRY (SEA BUCKTHORN)

Hippophae rhamnoides

Seaberry is inedible raw unless you enjoy really tart fruit; that said, the flavor, aside from the extreme tartness, is delicious, like tangy, very rich orange juice. And the fruit is, in fact, orange-colored (more red or yellow in some varieties). The berries are small, oval, about ⅜ of an inch long, and have a single seed within. Long popular in Russia and eastern Europe, seaberry has also been called Siberian pineapple.

YIELD 20 pounds per plant

USDA COLD HARDINESS ZONES 3–7

AHS HEAT ZONES 8–2

POLLINATION Plants male or female; a separate male needed to pollinate up to eight females

LUSCIOUS LANDSCAPE INDEX 3 (beautiful leaves, beautiful fruit, low maintenance, no serious insect or disease pests, drought tolerant; fruit is difficult to harvest and, for most people, needs processing)

REGIONS OF BEST ADAPTATION Everywhere

PLANT SIZE AND GROWTH HABIT Seaberry is a large, rounded shrub usually growing 8 to 15 feet high and wide. Stems are armed with inch-long thorns. Left to its own devices, the shrub will spread, sending up sprouts from errant roots, to eventually form a thicket.

Seaberry

GROWING TIPS Seaberry thrives in full sun although it will tolerate some shade. The plant likes all kinds of soils, including those by the seaside, except those that are poorly drained. A pH from 5.5 to 8.5 is suitable. Microorganisms at its roots let it use nitrogen from the air when fertilizer or other soil nitrogen is lacking. When young, seaberry does not tolerate competition from weeds.

Established plants require little care, bearing reasonably well even if they're hardly ever pruned. Plants bear best on two-year-old wood, so some pruning does improve production. If you're inclined, cut away some stems more than three years old to make way for and stimulate growth of younger, more productive wood. Depending on the site, you might also need to keep spreading root suckers under control.

VARIETIES

'Amber Dawn' ('Zaraga Dabat') This female grows only 4 to 6 feet tall. The berries are large and ripen early, and are said to be sweet enough for fresh eating.

'Dar Katugne' This female bears small red berries.

'Golden Sweet' ('Byantes') A female variety, 'Golden Sweet' yields yellow-orange berries that are sweeter than most others.

'Leikora' This female fruits heavily.

'Novostj Altaja' This productive female is somewhat less thorny than most others. The fruit is

also less acidic.

'Pollmix' This variety is a male, useful for pollination.

'Sprite' This female variety is compact, growing only a couple of feet high and wide.

SEASONS OF VISUAL INTEREST Seaberry is attractive summer, fall, and early winter. In summer, the branches are covered with slender, willowy leaves that, for most varieties, have a silvery sheen. The berries start to ripen in late summer, their orange color contrasting perfectly with the silvery foliage. They are borne in abundant clusters that press tightly to the stems. The berries continue their show, remaining on the stems well into autumn, until they dry out, rot, or are eaten by animals. The plants look nice planted together in informal groups or as a hedge.

HARVEST, STORAGE, AND USE You can determine when seaberries are ready for harvest by looking at them—they'll be bright orange, of course—and by nibbling on them. Even when dead ripe, the plants are reluctant to give up their fruits. Plucking off individual or clusters of berries by hand is the most straightforward, the most tedious, and potentially the most painful (because of the thorns) way to gather the crop *en masse*. Quicker and never painful is to prune off bearing branches, freeze them, and then knock off the frozen berries. You may be able to knock ripe berries off the plants while the stems are still attached, especially if you can arrange for a cold day when the berries are frozen (which, unfortunately, does not usually occur until after the berries are well past their prime). Don't wait too long to harvest the berries; they're at their peak for only a couple of weeks, then the flavor starts going downhill.

Seaberries make a delectable juice, not straight up but sweetened and then diluted with some water. The flavor is a rich combination of something akin to orange juice and passionflower juice. The berries also make a nice sauce, jelly, or flavoring for alcoholic beverages. Rich as it is in vitamins C and E and other health-promoting natural chemicals, it's no wonder that seaberry is credited with many medicinal properties. Avoid overheating anything made with seaberry or you'll destroy the flavor (and some of the vitamin C and other goodness it contains).

SHIPOVA

× *Sorbopyrus auricularis*

Shipova fruit on the branch

Picture a small pear, somewhat rounded, and yellow with a reddish blush. Inside the fruit tastes pearlike, sweet, and with a uniquely satisfying, meaty texture.

YIELD 50 pounds per tree

USDA COLD HARDINESS ZONES 4–9

AHS HEAT ZONES 8–3

POLLINATION Self-fruitful, but probably only partially so. European pear and whitebeam are probably good pollinators.

LUSCIOUS LANDSCAPE INDEX 1 (pretty foliage and blossoms, good tree form, long-lived, no pruning or pest control, late bloom usually escapes frosts, delectable fresh fruit)

REGIONS OF BEST ADAPTATION Shipova is probably widely adapted, although it is so rarely grown

that its regional limitations have not been tested.

PLANT SIZE AND GROWTH HABIT Shipova grows to become a pyramidal tree with a naturally good form as far as strength and beauty. That is, the main stem grows upright to become the trunk and central leader, and side branches come out at wide flat angles just the way they are supposed to on the ideal tree. The tree is quite vigorous, rapidly reaching 20 feet or more. Dwarfing rootstocks could keep shipova at a maximum of 8 feet or so.

SEASONS OF VISUAL INTEREST Shipova blossoms relatively late, so the show starts with the leaves. Actually, the fat, downy buds that precede the leaves are even somewhat decorative, like those of magnolia. Just after the leaves unfold, they are covered with a downy whiteness that fades from their upper sides as the season progresses, with the undersides of the leaves retaining much of that whiteness. After the leaves come the flower buds, each one yielding large clusters of blossoms. I've counted more than 20 blossoms in a single cluster! Each blossom is white and about ¾ inch across, with rose-colored stamens (the male flower parts) prominently visible in its center. Come autumn, shipova's leaves sometimes turn a very pleasant mix of pale salmon-pink and yellow.

A full-size shipova should be a definite candidate as a specimen tree to grace a front or back lawn, or, whether dwarf or full-size, as an allée to line a path or driveway. The strong, horizontal scaffold limbs also recommend it as a climbing tree. Plant shipova where it can develop its full size because it is difficult to contain—gracefully—with pruning.

GROWING TIPS Shipova has been so rarely grown that specifics about its cultivation are not well known. Still, judging from its parents (pear and white-beam) and other relatives, some educated guesses can be made. Shipova probably enjoys full sun and well-drained soil, and it can probably tolerate some drought.

Little or no pruning is needed because of the plant's naturally robust form. In fact, don't prune unless absolutely necessary, because it stimulates vigorous rather than fruitful growth and if shipova has a fault, that fault is its slowness to come into production—often eight years for a full size tree, less for dwarfed ones. Fruits are carried on long-lived, stubby growths (spurs), so the tree needs little or no pruning when mature and fruiting.

Don't be surprised if, once your shipova begins bearing, it starts having alternating years of feast and famine. Like 'Macoun' apple and a few other fine fruits, shipova can get into this unfortunate habit. Break this tendency by plucking a substantial percentage of fruitlets from the branches early in the season of a feast year.

Although fire blight has not been reported on shipova, it is presumably susceptible because both its parents are. Fire blight most readily infects excessively vigorous shoots, which is another reason to avoid severe pruning, as well as heavy fertilization and other practices that coax such growth. Planting lawn almost right up to the trunk provides a means of regulating growth: Let the grass grow longer and absorb more nutrients and water if shipova's growth seems excessive; mow lower if the tree needs to make more growth.

VARIETIES Shipova made its way to America early in the 20th century as a clone of an intergeneric hybrid between European pear and, probably, the common whitebeam. The same plant was also introduced in the 1980s with the name ‘Smokvarka’, although plants are not available as such. And then there were some ‘Baciu’ plants that differed from shipova in being smaller in all respects. The bottom line: Plant something called shipova.

HARVEST, STORAGE, AND USE Shipova fruits become ready for harvest in late summer and early fall. The fruit, when ripe, parts easily from the spur when cupped in your hand, then rolled upward with a slight twist. Dead-ripe fruits might also drop from the tree and will keep no more than a few days refrigerated. Picked firm and slightly underripe, then refrigerated, the fruits keep for weeks (perhaps longer, but I’ve eaten them all by then).

Ripe shipovas, ready to eat

SORBUS

Sorbus domestica (sorb tree), *S. aria* (whitebeam), *S. alnifolia* (Korean mountain ash), *S. yuana* (Yu's mountain ash)

Listed here are four good-tasting fruits in the genus *Sorbus;* all are small but tasty and ripen in autumn. The fruit of the sorb tree, also known as the true service tree, is about an inch across, yellow-green to brown with some red on it, and shaped like either an apple or a pear. When soft and ready to eat, some people find the flavor tropical, although to me it's more pearlike. Next comes the common whitebeam, also called chess apple, whose fruits when ripe are oval, red, about ⅝ of an inch across, and sweet and mealy. Korean mountain ash is the third species, and we can mention with this one the very similar Yu's mountain ash; these fruits are ½ inch or more and bright reddish pink or purple, and have a refreshing spicy flavor. Yu's fruits are larger.

YIELD 30 pounds per tree

USDA COLD HARDINESS ZONES 6–10 for sorb tree; 5–9 for whitebeam; 4–7 for Korean and Yu's mountain ash

AHS HEAT ZONES 8–6 for sorb tree; 8–6 for whitebeam; 8–3 for Korean and Yu's mountain ash

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (low maintenance and ornamental leaves, flowers, and fruits; the fruit is just not luscious enough to garner a higher rating)

Whitebeam (*Sorbus aria*)

REGIONS OF BEST ADAPTATION All four species have no significant limitations, although the sorb tree is somewhat more susceptible to insect and disease problems than are the others here. Such problems will be more prevalent in the more humid, eastern part of the country.

PLANT SIZE AND GROWTH HABIT Sorb tree can grow as high as 60 feet, but usually remains 45 feet or less, and has open, spreading branches. Whitebeam grows to 35 feet, or less, with a broad pyramidal form; this tree is often shrubby, with multiple trunks. The two “mountain ashes” grow to 45 feet and have a pyramidal shape when young that rounds out with age.

Fall color of *Sorbus yuana*

SEASONS OF VISUAL INTEREST The show for these sorbus trees starts in spring when the branches are decked out in clusters of creamy white flowers. Sorb tree's clusters are pyramidal; those of whitebeam and Korean mountain ash are flattish and 2 to 3 inches across. The flat clusters of Yu's mountain ash are somewhat broader.

Leaves of these trees are subtly beautiful for the whole season. Each leaf of the sorb tree, the only in this group of *Sorbus* species with compound leaves, is made up of 12 to 20 leaflets each 2 to 3 inches long. Whitebeam leaves can be spectacular, looking like fat, fuzzy magnolia buds as they're about to unfold and then opening covered in white down. That whiteness is the perfect foil for "hot" colors of nearby plants or objects in the season. As the season progresses, these leaves lose much of their down on their upper sides and become darker green. The combination of dark green uppersides and hairy white undersides makes the whole tree shimmer in a breeze. The leaves close the season in autumn by turning golden or reddish. Korean and Yu's mountain ash are downy when they first open, then turn a lustrous bright green, their undersides remaining paler. In autumn, especially in cooler regions, the leaves glow a golden yellow.

The sorbus fruits themselves are decorative, especially those of Korean and Yu's mountain ashes. Their brightly colored fruits persist well after the leaves fall to put on perhaps the most spectacular display of any fruits.

VARIETIES

'Redbird' ('Skyline') is a variety of Korean mountain ash that's particularly upright growing and has, of course, red fruits.

The following are all whitebeam varieties:

'Aurea' ('Lutetiana') The young growth of this variety is yellowish green.

'Chrysophylla' The leaves of this variety remain yellowish all summer, then turn butter yellow in autumn.

'Lutescens' Leaves are especially downy and white in spring, later turning gray-green.

'Majestica' This variety is notable for large, 6-inch leaves.

'Pendula' 'Pendula' boasts has a weeping form and stays under 10 feet high.

'Salicifolia' This variety is graceful, with lax branches and narrow leaves similar to those of willow.

GROWING TIPS These are low-maintenance trees, needing nothing more than careful planting and some care their first year, after which they pretty much care for themselves. All are fairly tolerant of a wide range of soils, and little pruning is needed. Whitebeam and Korean mountain ash frequently want multiple trunks, a natural tendency that can be encouraged or discouraged with your pruning shears when the tree is young.

Sorbus species are threatened by fire blight, which attacks most members of the rose family, of which sorbus is a member, in varying degrees. This bacterial disease most readily attacks overly vigorous growth and then spreads within the infected shoots. Limit the disease by not overfertilizing or pruning too aggressively, both of which stimulate succulent shoot growth. Control the disease by pruning stems 6 inches below infections, sterilizing pruning shears with a dip in alcohol between cuts to prevent possible spread. Leaves on infected stems are blackened as if singed by fire and their succulent tips curl over in characteristic "shepherd's crooks."

HARVEST, STORAGE, AND USE All these sorbus fruits must be dead ripe before they're edible. In the case of sorb tree and whitebeam, and possibly Korean and Yu's mountain ashes, let the flesh of harvested fruits soften thoroughly before you eat them. This softening might happen on the kitchen counter, on the ground beneath the tree, even on the tree.

The fruits have been used for more than just plain eating. Sorb fruits were fermented into the Roman drink *cerevisia,* which became the Spanish word *cerveza,* meaning beer. Sorbus fruits are also dried or made into cider, jams, and jellies.

WINTERGREEN (CHECKERBERRY, TEABERRY)

Gaultheria procumbens

Wintergreen ground cover in fruit

Wintergreen fruits are pea-sized and red. They're not juicy but have a refreshing, distinctive flavor. The fruits are also called teaberries; if you've ever tasted Teaberry Gum, that's the flavor.

YIELD Unknown and low

USDA COLD HARDINESS ZONES 3–6

AHS HEAT ZONES 6–1

POLLINATION Self-fruitful

LUSCIOUS LANDSCAPE INDEX 3 (attractive flowers, attractive and fragrant leaves, attractive fruits that persist into winter, no maintenance; requires specialized site conditions, fruits are few, providing a tasty, but not luscious, nibble, and the plant is demure except up close)

REGIONS OF BEST ADAPTATION Wintergreen thrives where summer temperatures stay relatively cool. The plants are fussy about soil, which can be modified to suit them on a limited scale.

PLANT SIZE AND GROWTH HABIT Wintergreen is a slowly spreading evergreen ground cover growing only 3 to 5 inches high. New shoots poke up through the ground from spreading underground shoots. The short aboveground stems make the leaves appear to grow in whorls.

SEASONS OF VISUAL INTEREST For all its demureness, wintergreen is pretty year-round. The leaves are an inch or two long, leathery, and lustrous. They are also evergreen, deep green on their upper sides and pale green on their undersides. The flowers—charming, ¼-inch, upside-down urns in white or pale pink—are borne sporadically from the middle to the end of summer. Flowers are followed by fruits whose bright red color is a perfect foil for the deep green leaves.

An ideal site for wintergreen is beneath the shade of evergreens, mimicking the woodland sites that the plant calls home. Wintergreen is good company for mountain laurel, rhododendron, blueberry, leucothoe, azalea, and other heath plants both visually and because all these plants enjoy similar soil conditions. Planted along walkways, wintergreen provides a pleasant wayside nibble. Wintergreen is very pretty poking its green leaves and red berries through winter snow, providing a congenial, visual juxtaposition of the living and the nonliving, both pristine.

GROWING TIPS If you have or can create a suitable site for wintergreen, the plant is easy to grow. It likes the coolness of shade and will thrive in moist, well-drained soils that are acidic and relatively infertile. Test the soil before planting and if the pH is more than between 5.0 and 6.0, add pelletized sulfur to bring the acidity into that range. Use ¾ of a pound per 100 square feet in sandy soils, or 2 pounds per 100 square feet in loams, for each pH unit that the soil is initially above a pH of 5.5.

Space plants about a foot apart in all directions for them to eventually blanket the ground. Also mix a generous amount of peat moss with the soil of each planting hole. After planting, spread an organic mulch such as shredded leaves or leaf mold over the planting area.

Replenish mulch, as necessary, which means adding more on an annual basis. Water to prevent the soil from drying out. If the soil pH was initially high, it will creep back up over the years, so periodically bring it back down by spreading more sulfur. Fertilize only if the leaves are yellowing and growth is at a standstill. Too much fertilizer can kill wintergreen. Use an "acid" fertilizer or, preferably, soybean meal, the latter at a rate of a pound per 100 square feet.

VARIETIES Despite reports of varieties with larger fruits ('Macrocarpa' and 'Dart's Giant Red') or white fruits ('Alba', but why would someone want a white-fruited winterberry?), the plants that are generally available are unnamed seedlings or unselected wild clones.

HARVEST, STORAGE, AND USE Wintergreen is a fruit you can harvest at your leisure because it ripens in autumn and then, unless taken by animals, remains on the plant for months. Don't forget to enjoy the leaves, which emit their characteristic pleasant aroma when crushed or brewed into tea. Be careful about overdoing the tea or the berries; they contain methyl salicylate, which is chemically similar to and should carry some of the same cautions as aspirin. Wintergreen flavor was once distilled from the plant's leaves but now it's made chemically or extracted from birch.

SUBTROPICAL FRUITS TO GROW IN CONTAINERS

Once you've caught the fruit "bug," you might want to try growing subtropical fruits, a possibility if you plant them in pots. (For more on fruit trees in pots, see "Potted Fruits" in the chapters entitled "Landscape Design Basics" and "Growing the Plants.") In addition to getting to eat these luscious, exotic fruits, you achieve a special landscape effect, one that can evoke, depending on the plants, the lusher, warmer clime of, say, mountainous Asia or the sunny, warmer clime of the Mediterranean.

Winter care is where these subtropical fruits part ways with temperate-zone fruits. Subtropical fruits cannot be left outdoors where winters are cold. Just how much cold can be tolerated depends on the particular fruit, and is spelled out below for each. The favored winter home for these plants is a sunny window in a cool room, a barely heated basement, a Florida room, or—the Ritz of winter quarters for subtropicals—a cool greenhouse. Subtropical fruits that are evergreen require some light in winter. The cooler the temperature, the less light they can get by with. Of course, don't make the temperature so cool as to harm a plant.

Below is my list of top picks of potted subtropical fruits for luscious landscaping. Note that I don't mention potted tropical fruits for luscious landscaping. Banana, papaya, and many other tropicals have bold foliage that can create a lush, tropical mini-paradise up north. But fruit production, unless you can winter them in a warm greenhouse (truly a "hothouse," to use that archaic term), is pretty much impossible. I couldn't bear the forlorn look of my potted banana and papaya plants waiting out winter in my house—even if they did perk up in summer—but still never ripened fruit.

Citrus (*Citrus* spp., various species that include oranges, lemons, and limes): Hardiness variable, generally to about Zone 9. Mandarins are among the most hardy, tolerating some frost, and Key limes are the least hardy. Many varieties exist of each of these other citrus fruits, and the smorgasbord has been further expanded with hybrids within this genus and even with the related genus of kumquats, resulting in such tongue twisters as citrangequats. All are beautiful plants with glossy, dark green, evergreen leaves that set off the fragrant white flowers and then the usually bright yellow or orange fruits. The only citrus I'd avoid is the one most commonly grown in pots, the calamondin, which is practically inedible yet no prettier or easier to grow than any other citrus.

Most citrus will bear fruit without cross-pollination and require little pruning beyond some cuts to let in light among the branches and to balance the top with the roots lost when repotting. No need to harvest fruits just as soon as they ripen, which is when they are fully colored, because the ripe fruits keep well hanging on the plant for a while—and look very decorative doing so.

Key lime

Feijoa (*Acca sellowiana*, also commonly known as pineapple guava): Zone 8. This green, torpedo-shaped fruit has a flavor that combines the best of pineapple, strawberry, and mint. The plant has downy, evergreen leaves and flowers whose fleshy, purple-tinged white petals enclose a bottlebrush center of dark pink stamens. The petals, incidentally, are also edible and delicious, minty and very sweet.

Prune lightly, only as much as is needed to balance root loss when repotting and to keep the plant correctly sized to its pot. A few varieties exist and most require cross-pollination for fruit set. You can tell when the fruit is ripe by the slight color change or, more dramatically, because it will have just dropped from the plant.

Fig (*Ficus carica*): Zone 8. If you've never tasted a fresh fig, you're in for a treat, a juicy, sweet treat that tastes very different from the more familiar dried product. The plant is deciduous and lush when in leaf even though it's native to Mediterranean climates. Figs are very easy to fruit in pots because they tolerate all kinds of pruning, most varieties do not need pollination, and many varieties bloom on new growth. Encourage vigorous growth and protect the old stems through winter and you'll get two crops from some varieties, the first, earlier crop on the previous year's stem growth and the second, late-summer crop on new shoots. Prune one-crop varieties more severely to encourage vigorous new growth on which fruits are borne.

'Brown Turkey' (one crop), 'Celeste' (mostly one crop), 'Green Ischia' (two crops) and 'Black Mission' (two crops) are among the recommended varieties, but there are many, many more from which to choose. Delay harvest until the fruit is very soft and drooping, at which point it usually has a "tear" in its eye.

'Brown Turkey' fig

Kumquat (*Fortunella japonica*, *F. crassifolia*): Zone 9. Kumquat is a citrus relative bearing small, orange fruits that are unique in that you eat the whole thing, skin and all. It is the skin that is sweet and the flesh that is tart. 'Nagami' is the usual, oblong-shaped market variety; the less common 'Meiwa' is round and less tart. The shiny, dark green, evergreen leaves form a perfect backdrop for

the heavenly scented white flowers and then the orange fruits. The plant requires neither cross-pollination nor more than a little pruning to contain it, shape it, and thin out crowded branches. Harvest when the fruit is fully colored.

Potted kumquat

Passionfruit (*Passiflora* spp.): Zone 9. This evergreen vine yields a breathtakingly beautiful flower, fragrant in some species, as well as an egg-shaped, highly aromatic fruit. For more about the fruit and flower, consult the encyclopedia section under "Maypop," which is a passionfruit species that is an herbaceous perennial and survives to Zone 5. Most commonly eaten is the purple granadilla, *P. edulis*, a self-fruitful plant bearing a fruit the size and shape of an egg but purple. Within the tough, inedible skin is a cavity filled with numerous edible seeds, each surrounded by an ambrosial sac of jelly. Other passionfruits, such as yellow passionfruit (*P. edulis* var. *flavicarpa*) and red granadilla (*P. coccinea*), do need cross-pollination. Passionfruits bear flowers in the leaf axils of new growth, so new growth is always needed for continued flowering. Coax new growth and contain the plant by pruning in late winter, cutting back all weak stems and shortening by at least half any vigorous stems. Also provide some sort of support for the vines, which cling by tendrils. Harvest by picking up dropped fruits.

Ripening passionfruit (*P. edulis*)

Pomegranate

Pomegranate (*Punica granatum*): Zone 8. This familiar and ancient fruit grows on an extremely attractive shrub that sports glossy, bright green leaves that naturally drop in autumn and flamboyant flowers that look like scarlet crêpe paper that's been crumpled into and is bursting out of a scarlet funnel. It is native to western Asia and prefers dry climates and abundant summer heat. Prune lightly, thinning out dense growth, shortening lanky growth, and removing excess suckers from ground level. Many varieties exist, some sweet, some pink, and some almost seedless, in addition to 'Wonderful', which usually graces supermarket shelves. Pomegranate is partially self-fertile, so planting two or more varieties increases fruit set. Harvest in late summer when fruit is fully colored and makes a metallic sound when tapped.

Suggested Reading and Online Resources

PERMACULTURE

Hemenway, Toby. *Gaia's Garden: A Guide to Home-scale Permaculture*. Chelsea Green Publishing Co., 2001.

Holmgren, David. *Permaculture: Principles and Pathways Beyond Sustainability*. Holmgren Design Services, 2002.

Jacke, Dave, with Eric Toensmeier. *Edible Forest Gardens, Volume One: Vision & Theory*. Chelsea Green Publishing Co., 2005.

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Mollison, Bill. *Introduction to Permaculture*. Tagari Publications, 1997.

Morrow, Rosemary. *Earth User's Guide to Permaculture*, 2nd Edition, Simon and Schuster, 2007.

Permaculture Institute, PO Box 3702, Pojoaque, NM, 87501, *www.permaculture.org*

Barking Frogs Permaculture, P.O. Box 52, Sparr, FL 32192, *www.barkingfrogspermaculture.org*

LANDSCAPE DESIGN

Creasy, Rosalind. *The Complete Book of Edible Landscaping*. Sierra Club Books, 1982.

Creative Home Landscaping, Jill Fox (Editor). Ortho Books, 1987.

Easton, Valerie. *A Pattern Garden: The Essential Elements of Garden Making*. Timber Press, 2007.

Jacke, Dave (with Eric Toensmeier). *Edible Forest Gardens, Volume Two: Design and Practice*, Chelsea Green Publishing, 2005.

Kingsbury, Noel. *Gardens by Design*. Timber Press, 2005.

Kourik, Robert. *Designing and Maintaining your Edible Landscape Naturally*. Metamorphic Press, 1986.

GROWING FRUIT IN CONTAINERS

Rivers, Thomas. *The Orchard House, or the Cultivation of Fruit Trees in Pots under Glass*. Longman, Green, Longman, and Roberts, 1860.

Turner, William. *Fruits and Vegetables Under Glass*. A. T. De La Mare Printing and Publishing Co., 1912.

PRUNING

Edmunds, Alan. *Espalier Fruit Trees, Their History and Culture*. Pomona Books, 1986.

Reich, Lee. *The Pruning Book*. Taunton Press, 1997.

BACKYARD ORCHARDING

McClure, Susan. *Rodale's Successful Organic Gardening: Fruits and Berries*. Rodale Press, 1996.

Otto, Stella. *The Backyard Berry Book*. Ottographics, 1995.

———. *The Backyard Orchardist*. Ottographics, 1995.

Reich, Lee. *Growing Fruit in Your Backyard*. Macmillan, 1996.

———. *Uncommon Fruits for Every Garden*. Timber Press, 2004.

Rombough, Lon. *The Grape Grower*. Chelsea Green Publishing, 2002.

Westwood, Melvin. *Temperate Zone Pomology*. Timber Press, 1993.

Suppliers

Adams County Nursery
717-677-8105
www.acnursery.com

Burnt Ridge Nursery
360-985-2873
www.burntridgenursery.com

Cummins Nursery
315-789-7083
www.cumminsnursery.com

Edible Landscaping Nursery
800-524-4156
www.eat-it.com

Fedco Seeds
207-873-7333
www.fedcoseeds.com/trees.htm

Grimo Nut Nursery
905-934-6887
www.grimonut.com

Hartmann's Plant Company, Inc.
269-253-4281
www.hartmannsplantcompany.com

Hidden Springs Nursery
931-268-2592
www.hiddenspringsnursery.com

Just Fruit & Exotics
850-926-5644
www.justfruitsandexotics.com

Logee's Greenhouses
860-774-8038
www.logees.com

Nolin River Nut Tree Nursery
270-369-8551
www.nolinnursery.com

Nourse Farms
413-665-2658
www.noursefarms.com

One Green World
877-353-4028
www.onegreenworld.com

Raintree Nursery
360-496-6400
www.raintreenursery.com

Saint Lawrence Nurseries
315-265-6739
www.sln.potsdam.ny.us

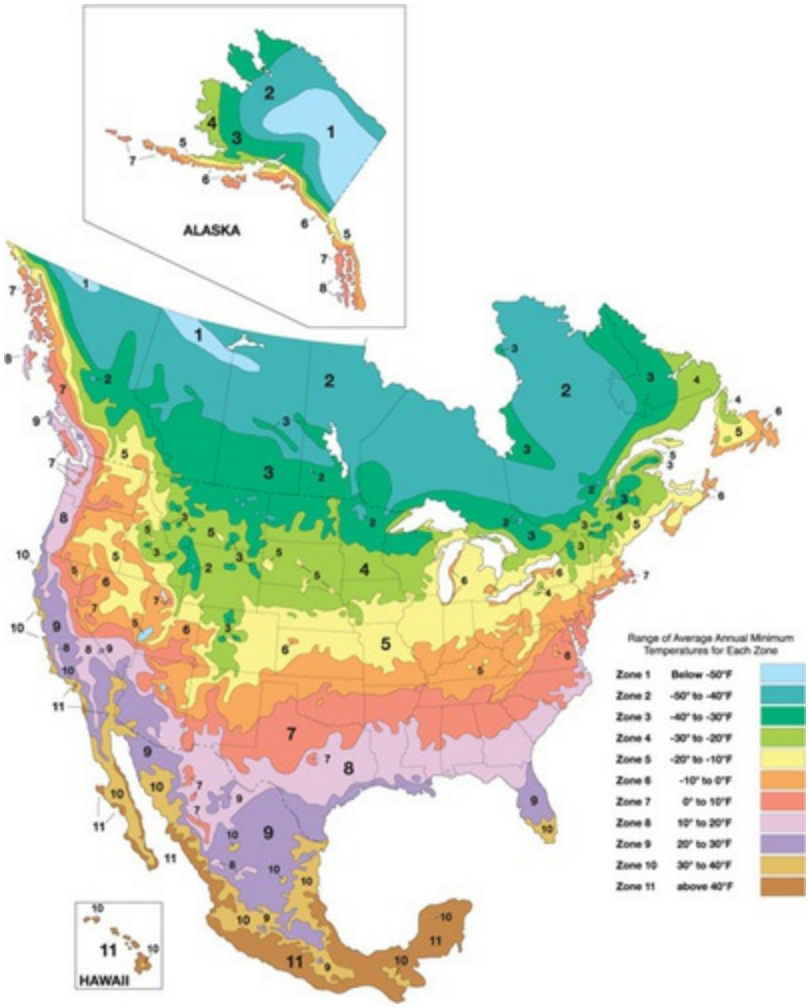
Stark Brothers Nurseries
800-325-4180
www.starkbros.com

Trees of Antiquity
707-433-6420
www.treesofantiquity.com

Tripple Brook Farm
413-527-4626
www.tripplebrookfarm.com

USDA Hardiness Zone Map

The United States Department of Agriculture (USDA) created this map to give gardeners a helpful tool for selecting and cultivating plants. The map divides North America into 11 zones based on each area's average minimum winter temperature. Zone 1 is the coldest and Zone 11 is the warmest. To locate your zone, refer to the map here, or for the most up-to-date information, visit the National Arbor Day Foundation's Web site: www.arborday.org/media/zones.cfm.

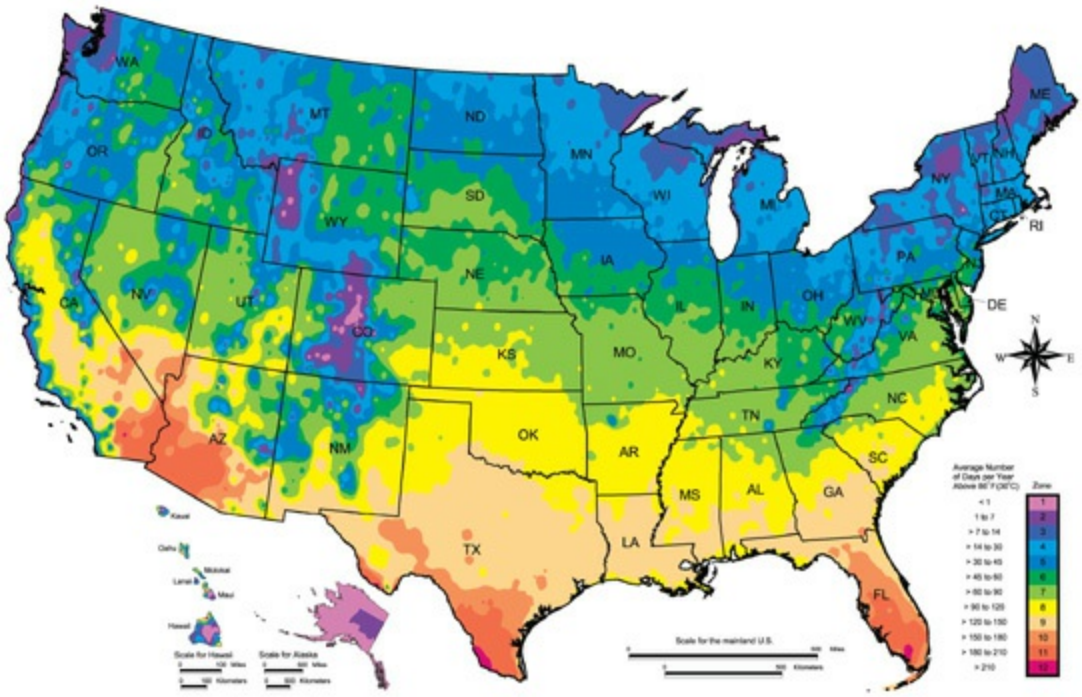


AHS Heat Zone Map

The American Horticultural Society Heat Zone Map is used in the same way as the USDA Hardiness Zone map. The Heat Zone map is divided into 12 zones, based on the average number of days a region experiences temperatures over 86°F (the temperature at which plants begin to suffer damage from the heat). The AHS has termed these "heat days." Zone 1 experiences less than one "heat day" per year, while Zone 12 has more than 210.

SUNSET ZONE MAP

To see the Sunset Zone Map, visit www.sunset.com.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Kauai
Oahu
Molokai
Lanai
Maui
Hawaii
Scale for Hawaii
Scale for Alaska
Scale for the mainland U.S.
Average Number of Days per Year Above 86°F (30°C)
Zone
< 1
1 to 7
> 7 to 14
> 14 to 30
> 30 to 45
> 45 to 60
> 60 to 90
> 90 to 120
> 120 to 150
> 150 to 180
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